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## *Introduction*

We are pleased to present our report on the research activities at the University of Colorado at Colorado Springs for the fiscal year 2005 (July 1, 2004 – June 30, 2005).

The report summarizes the externally sponsored program activities of the faculty, provides highlights of selected research areas, lists the major publications of the faculty, and presents the titles and advisors of doctoral dissertations and masters theses published by our graduate students.

A few years ago, this campus embarked on an exciting initiative through which we seek to significantly expand and enhance the research activities of the faculty. Because research and teaching are inexorably intertwined, the educational mission of the campus will be strengthened as well. By 2010, the campus seeks to increase externally funded activities by a factor of five over that for 2001.

Over the years, the faculty of this university has established an excellent record of research accomplishments. The recent initiative, however, seeks to strengthen the research capacity of the institution, and enable the faculty to achieve even greater excellence in this area. Economic factors play a key role in creating research capacity making growth in external support for research a basic requirement. We do believe strongly, however, that all good research should be highly valued – funded or not.

During the past year, significant strides toward meeting the 2010 goal were continuing to be made. Since FY 01, total external funding has increased by more than a factor of two, while total budgeted new awards (which includes the total budgets of multi-year projects) has increased by more than a factor of four. And during FY 05, the budgeted funding metric increased over its counterpart for FY 04. External budgeted funding provided by sponsors during FY 05 increased over 39%. There was a decline in overall new awards in FY 05 partially due to a few very large awards received the year before. With total funding coming to campus on the increase over time, this one year decline should be considered an anomaly.

## ***Summary of Externally Funded Programs***

As noted previously in the ***Introduction***, by 2010 the campus seeks to increase externally funded programs by a factor of five compared to 2001 levels. In 2001, the position of Senior Faculty Associate for Research was created on the campus, and the person holding that position was charged with advancing the campus' research activities, especially externally funded activities.

That first year, the Faculty Associate identified three goals for his office, which if met, would contribute greatly to the research objectives. Those goals were as follows:

- To affect a cultural change on the campus, especially with respect to externally sponsored programs.
- To enable a stronger campus voice for the research-active faculty.
- To identify and eliminate unnecessary or inappropriate administrative hurdles for faculty seeking and managing externally funded projects.

To assist in accomplishing these goals, a campus wide Faculty Research Council was formed and charged with advising the administration on research policy, recommending improvements in research support services, and suggesting methods for recognizing excellence in research and creative works – with special emphasis on externally sponsored programs. The members of this Research Council represented a wide range of disciplines, and were selected due to their desire to advance the research agenda. Further, almost all of the members had been active in seeking and acquiring external funding. Hence, this council was designed to be an effective faculty voice for research.

Consistent with the three above-stated goals, and drawing from recommendations of the Research Council, several campus organizations involved with research administration have been reorganized so as to be more responsive to the needs of faculty seeking funding and/or managing externally funded projects. Also, faculty and staff

mentoring programs have been established, and a heightened appreciation of the importance of research (funded or unfunded) has been achieved.

During the 03-04 Academic Years, the Research Council developed a document entitled “*Expanding Research Horizons: Concepts for a Campus Strategic Plan for Research*,” which enumerates specific steps that the campus must now take to maintain the positive momentum of the research initiative. (This document is included in Appendix A of the report.) Thus, the campus now has a roadmap which will help us plan for the future. The concepts identified are grouped in six areas, namely:

1. *Continue to strengthen the research culture of the campus (faculty and administration)*
2. *Leverage critical capabilities*
3. *Provide high-profile leadership*
4. *Position campus for opportunities*
5. *Provide sustainability*
6. *Pursue fundraising activities committed to rewarding and enhancing research capacity*

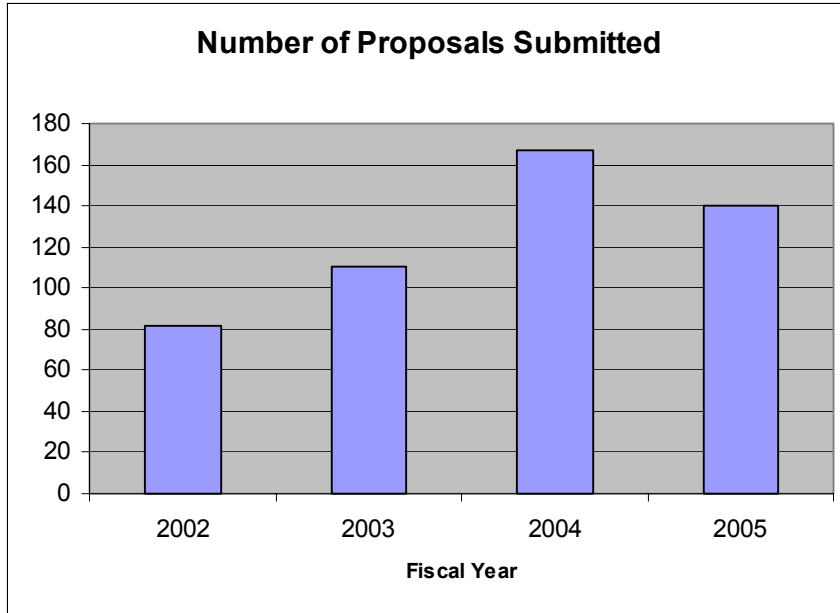
In November, 2003, this plan was unanimously endorsed by the full Faculty Assembly, and in December, 2003, it was adopted by the campus administration.

One of the key strategies developed under *Leveraging critical capabilities* was to identify fruitful multidisciplinary research areas matched with faculty research strengths, and, where appropriate, create research institutes and centers focused on those areas. Listed in Table 1 on the following page are those research units created during the last three years. Also, shown are the colleges or departments most heavily involved with the research unit at this time, although each research unit is charged with fostering cross-departmental and cross-college activities.

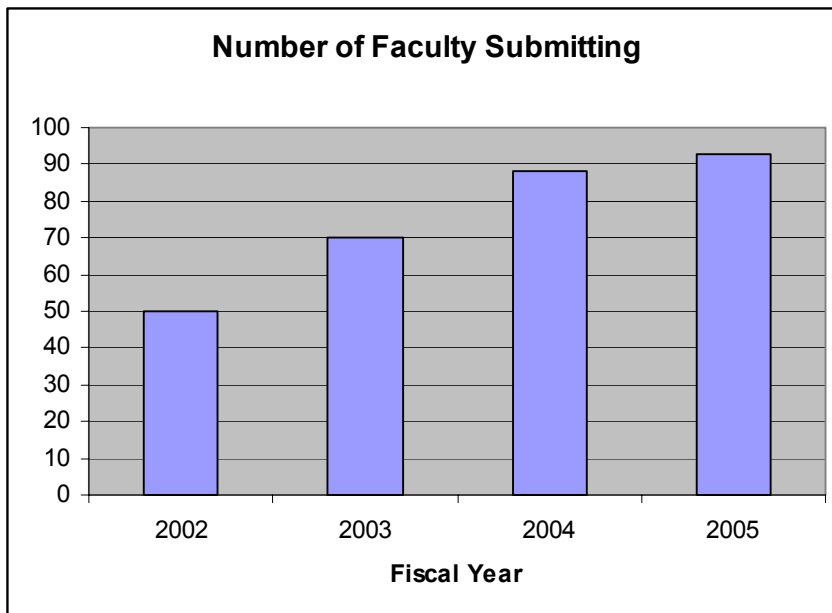
**Table 1**  
**New Centers and Institutes**

- **Bioenergetics Institute**
  - Departments of Biology and Physics
- **Magnetism and Magnetic Materials Center**
  - Department of Physics
- **Trauma Research Center**
  - Department of Psychology
- **NISSC – Network Information and Space Security Center**
  - Campus Wide
- **Education Outreach Center**
  - Campus Wide
- **Austin Bluffs Center for Research and Development**
  - Campus Wide – all disciplines
- **Institute for Science and Space Studies**
  - Campus Wide
- **Center for Space Studies**
  - Campus Wide

Several indicators are shown below to track the research effort over the last four fiscal years. Shown in Figure 1 below is the history of the number of proposals for external funding submitted during the last four fiscal years. It should be noted that, although the number was high, there was a decline from last fiscal year. The number of faculty submitting a proposal during the FY 05 has increased and is almost double that for FY 01, as indicated in Figure 2. The 140 proposals submitted by the 93 faculty members in FY 05 should be considered very substantial. This is in light of the fact that we currently (FY 05) have 193 tenured or tenure-track faculty on campus, and the total number of faculty has remained almost constant over the four-year period being considered here.



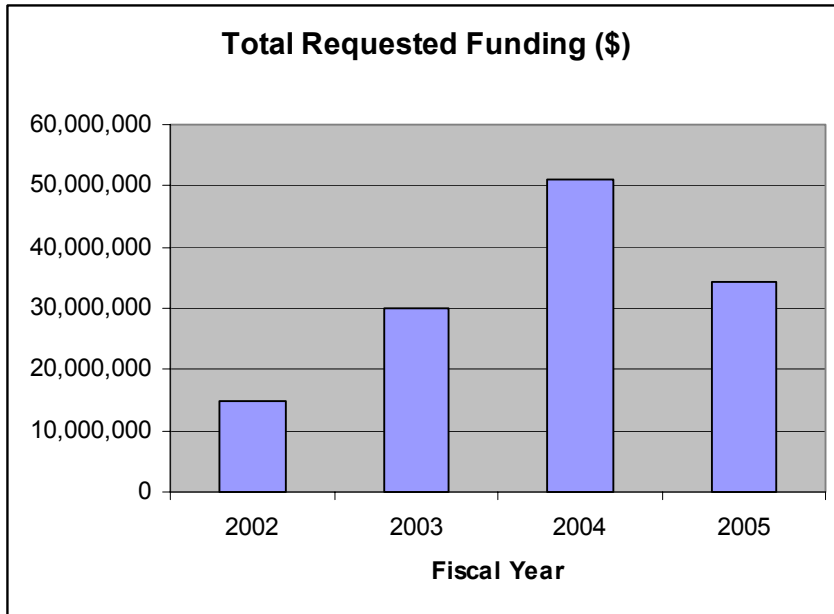
**Figure 1**



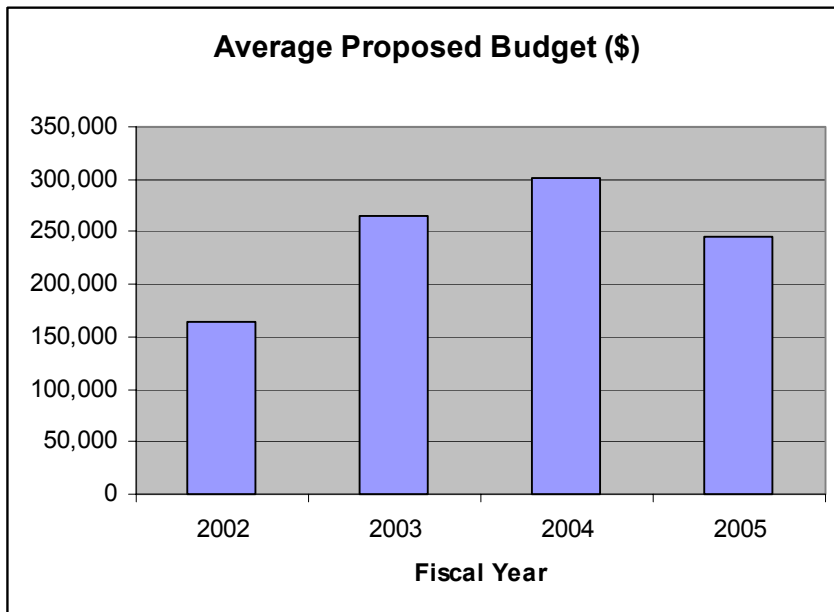
**Figure 2**

Paralleling the decrease in the number of proposals submitted is the decrease in the total requested funding. Figure 3 indicates that total proposal budgets are still substantially higher than in FY 01. The average proposal budget figure has also decreased

for FY 05. This downward trend in these numbers can be explained to a great extent by the dramatic successes in FY 04. One grant in particular skewed the trends. In FY 04 the campus received a grant from the Department of Defense Multidisciplinary Research Program of the URI (MURI) for \$5.25 million. Because of the size of this grant and the

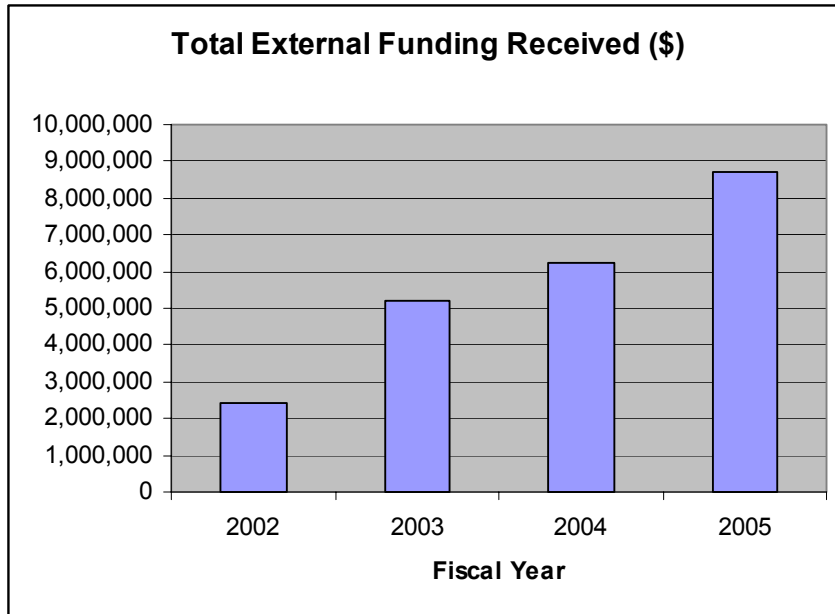


**Figure 3**



**Figure 4**

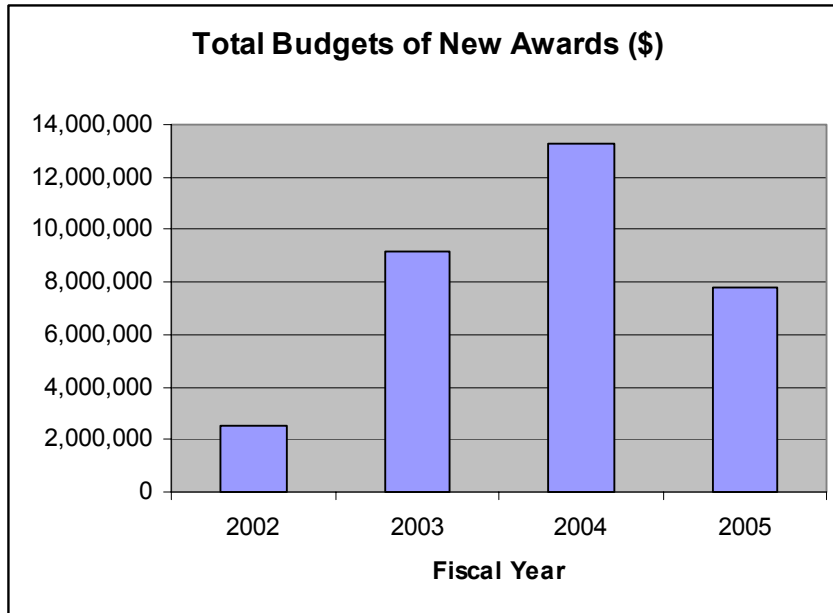
Unique circumstances of receiving such a large award, the numbers for FY 04 in many of these categories were exceptional. The campus did quite well in FY 05 and, indeed, the total amount of funding from sponsors received during the year was up from FY 04 (Figure 5).



**Figure 5**

There was significant growth in external funding received in FY 05. Shown in Figure 5 is the total external funding awarded during FY 05, compared to that for the three prior years. As indicated, funding awarded has increased by more than a factor of 3.6 over that for FY 02. A total of \$8.71 million was received for FY 05.

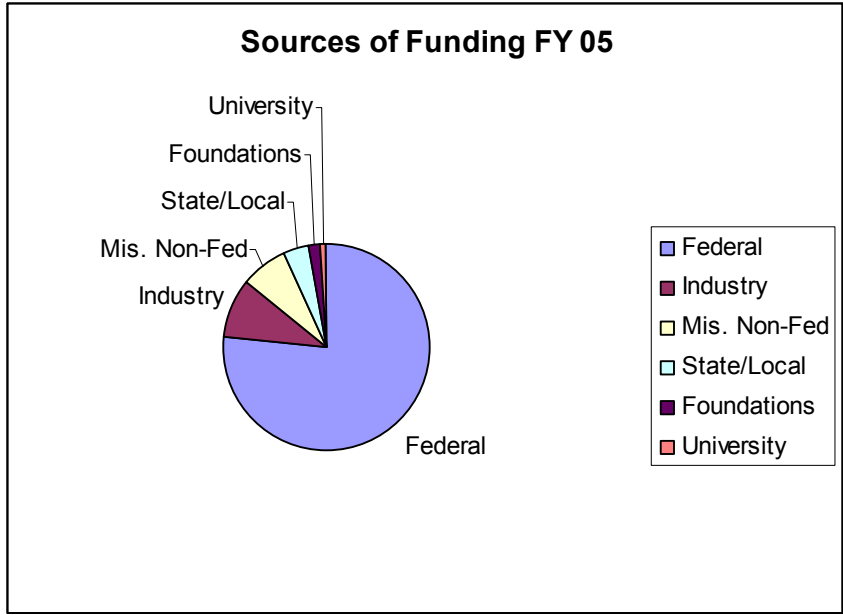
A more problematic number is revealed in Figure 6. The total of new awards received during FY 05 was down significantly from FY 04. Again, some of this can be explained by the single, large MURI grant discussed above. But even discounting the MURI grant in FY 04, the total value of grants coming into the campus decreased for FY 05. We hope that a contributing factor might be that the most grant-active faculty received grants in the FY 04 that they are still working on, giving them less time to pursue new avenues of research funding. We will not be certain of this hypothesis until the numbers are available for FY 06.



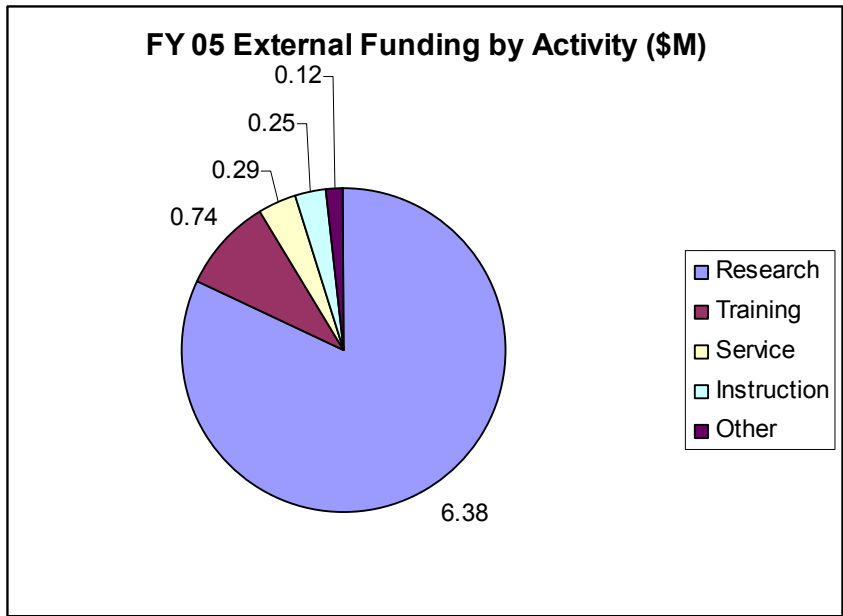
**Figure 6**

The breakdown regarding the sources of funding for the FY 05 awards (Figure 5) is presented in Figure 7 below. These data indicate that 76.4 percent of the FY 04 funding received was from federal sources (e.g., NSF, NIH) while only 4.0 percent was from state or local governmental sources. Rounding out the other sources, 0.7 percent was received from other universities (which may originally be federally funded projects), 2.1 percent was received from foundations, 7.5 percent from miscellaneous non-federal sources, and approximately 9.3 percent was received from industry sources. The increase from industry sources is a very good trend. The campus needs to work hard to keep increasing the amount of funding from this, so far, underused resource.

Finally, Figure 8 reveals the breakdown on the activities funded by the FY 05 awards. Specifically, \$6.38 million in awards funded research activities, \$0.25 million in awards funded activities related to instruction or training, and \$0.29 million supported public-service activities. Additionally, we received \$0.74 million for training.



**Figure 7**



**Figure 8**

## ***Selected Research Highlights***

### *Merging Research, Education, and Entrepreneurship*

Professor William B. Martz, Jr., College of Business – Martz’ background is not confined to academics but combines over 10 years of business experience with 9 years of teaching. His business experience includes working three years in the family-owned Chevrolet car dealership where he ran the parts department, helped with the bookkeeping and, yes, sold new and used cars.

In 1983, Ben entered the Masters of Science program at the University of Arizona (UA) where he was assigned as a teaching assistant for basic management information systems (MIS) classes. As a result of teaching those classes, Martz switched to the Ph.D. program to pursue a career in academics.

At that time, one research stream at UA was studying groups and how to improve meetings for groups (i.e. groupware). Basically, the research identified ways to automate meetings. Researchers decomposed and studied questions like: how can groups work together better?; what are the basic problems with groups and teams?; and, most importantly from an MIS perspective, how to develop software to make the group meeting process more efficient and effective. Ben joined this research group in 1984 as a programmer and became the lead Ph.D. research associate for the project in 1987. As part of funded research projects with IBM, Ben collected field study data and reported on the impact of using the software in real-world situations. Over the years, this research project was able to attract millions of dollars in funding and generate a substantial body of research publications.

In 1989, the research project created another significant opportunity. Along with two UA faculty members and a student, Dr. Martz co-founded Ventana Corporation - a computer software company created to market the software designed by the UA research project team. Ben started as the Vice-President for Research and Development and became Ventana’s President and COO from 1992 to 1996. This company was the first significant attempt at technology transfer for the Business School at UA. In the agreement, UA licensed the software to Ventana and in return, was a part owner of Ventana. With the technology transfer completed, Ventana was able to license the

software to IBM for resale under the name TeamFocus<sup>®</sup> and to market the software directly to customers under the name GroupSystems<sup>®</sup>. In 1994, *PC Magazine* awarded GroupSystems<sup>®</sup> its Editor's Choice<sup>®</sup> Award as the Best Electronic Meeting Software.

During this same time period, the study of Group Decision Support Systems (GDSS) evolved into a major research stream in the management information systems area. As part of UA and Ventana, Martz was involved with some of the early field study research in the area of GDSS. Some of the basic research findings with electronically supported groups (ESG) versus traditional face-to-face (FTF) have been:

- Anonymity of ESG is helpful
- ESGs save time
- ESGs generate more ideas than FTF
- Members of ESGs participate more than members in FTF
- Members of ESGs are more satisfied with the group's decision than FTF

Dr. Martz returned to academics in 1996 when he took a teaching position at California State University, Chico (Chico State) and four years later was appointed Associate Professor at the University of Colorado in Colorado Springs. Over that time he maintained his interest in groupware and has been able to apply his findings to other complementary areas. Two key areas where groupware experiences have proved insightful are education and entrepreneurship. The software has been used by students in various classes for focus groups, team projects, performance evaluations, etc. In addition, Ben has created and offered complete courses around managing groups and teams with electronic support. As telecommuting and distance education become more popular, the insights gained from groupware are even more practical today.

While at Chico State, Ben became interested in the areas of problem-based and active learning. With a grant from Fireman's Fund Insurance Company (FFIC), he was able to create what are termed "on-campus internships." These internships are a hybrid between traditional internships where students are on the company's site and on-campus work study where students work for the college or department. In the Chico State on-campus internships, students were paid to work for FFIC but were able to stay on campus which was over three hours away from FFIC headquarters in Marin, California. Each week, students called in and talked with FFIC managers to discuss their project status and

detail the work for the next week. As a direct result of the on-campus internship program, FFIC secured seven full-time employees.

It is evidenced that entrepreneurship has been with Dr. Martz throughout his life. So, it seems natural that in 2004, working with Jeff Ferguson, a marketing professor, he helped revitalize the UCCS College of Business Center for Entrepreneurship. One of the key components of the Center's revitalization is to combine the themes of business development, education and internships into a productive and interesting learning experience. To accomplish this, the Center creates the culture of a "virtual" company organized and run by students. With the help of the College of Business' Entrepreneur in Residence, Warren Schubert, a 1976 graduate of UCCS - students are experiencing what it is like to "run a company." Students are "hired" to be programmers, accountants, technical writers, market researchers, etc. and take on these roles with the intent of commercializing a product.

Martz' career is a product of several merging themes: practical research, active learning education, real-world entrepreneurship. He believes the combination of these themes are a contribution to a positive educational culture.

### *Making an Urban Public*

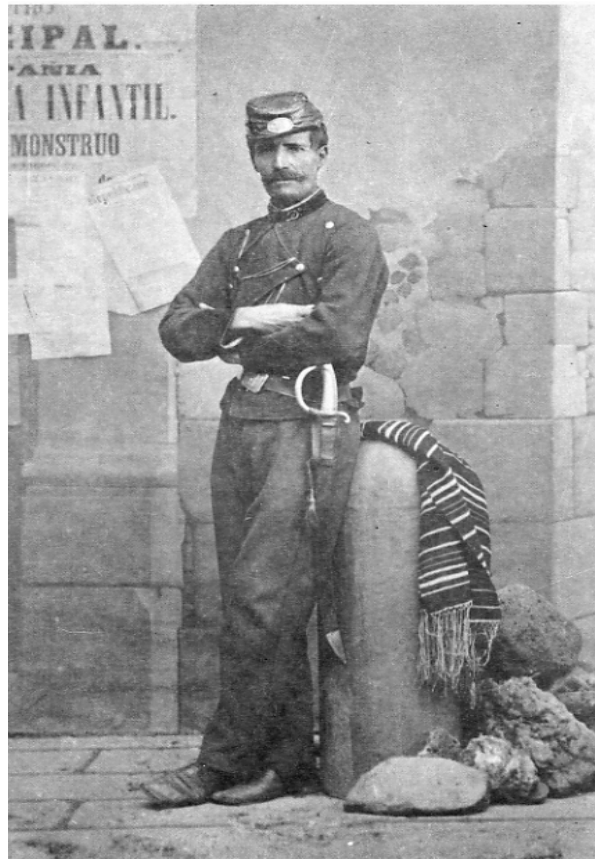
Assistant Professor Christina Jiménez, History Department – Dr. Jiménez was awarded two full-year fellowships for the research and writing of her book project, "Making an Urban Public: How the City Revolutionized Citizenship in Mexico, 1880-1930." She spent the 2003-04 Academic Year at the Shelby Cullom Davis Center for Historical Studies at Princeton University as a Fellow in the "Cities: History, Society, and Space" series. Christina continued her project through the summer and fall 2004 as a Resident Scholar at the Center for Cultural Studies at UC Santa Cruz, funded by a Ford Foundation Postdoctoral Fellowship. Through the course of these residential fellowships, she also gave papers at the Princeton University Latin American Studies Program, Duke University Latin American Studies Program, American Historical Association

conference, Latin American Studies conference, and University of Texas, Austin conference on “Public Space in Mexico.”

Her project, “Making an Urban Public,” is a social and cultural history of urban politicking in Morelia, Mexico--the capital of the state of Michoacán. Based on twelve months of archival research and an analysis of thousands of letters written by city residents to the municipal city council, as well as internal government memos and minutes, her book manuscript explains how a wide range of city residents seized available opportunities to claim their rights to public spaces, modernized public services, and public protections under the 1857 Mexican Constitution. By holding local authorities accountable for their rhetoric of protecting public health, morality, consumer rights, and public beauty, urban inhabitants carved out strategic and empowering niches from which they forwarded their own agendas. In contrast to state-centered approaches, this research highlights the agency of popular residents from street sweepers and municipal gardeners, to prostitutes and street peddlers. Residents were, in fact, incredibly vocal, savvy, and persistent in their daily discussions about modernizing efforts, municipal regulations, improvement projects, (including sewers, public fountains, paved roads, and sidewalks), and the creation of new public spaces, like plazas and parks. In these political dialogues, residents used notions of “the public” and the “public good” to invert hierarchies of moral authority, claiming their own contributions to the public and the state’s failure to protect public interests.



“Making an Urban Public” thus describes how the city created physical and political space for the expansion of the Mexican “public” in an era of limited citizenship. Drawing on ideas of liberalism and modernity in turn-of-the-century Mexico, Christina argues that a person’s conduct, associated both with external appearance and internal morality, was used to justify his or her rights and privileges, or the denial of them. The liberal focus on conduct, in fact, was rooted in the contradictions of liberalism which, on the one hand, promised universal representative within an inclusion political sphere based on Natural Law, on the other hand, it



circumscribed the public through exclusionary strategies based on culturally-biased notions of proper behavior, appearance, rationality, and social practices. In response to repressive regulations, residents used their local identity as *vecinos* (lit: neighbor-burgher) to position themselves as deserving members of the “public” by performing certain moral, cultural, and rhetorical stances in their letters. These dynamics are particularly revealing given the absence of race-based language (rooted in universal claims of classic liberalism), in conjunction with socially- and culturally-defined mechanisms of exclusion based on behavior and appearance (essentially racially- and culturally-based exclusions grounded in scientific politics and positivism). In an effort to circumscribe the public, the cultural uplift agenda of modernizing liberals often amounted to “civilizing” the *indio* out of the urbanite; to “de-Indianize” Mexico’s urban public in contrast to the rural *pueblo mexicano* (the Mexican people).

Complementing the transformative role of rural politics during these decades, this research seeks to highlight the contributions of urban politics beyond those of organized

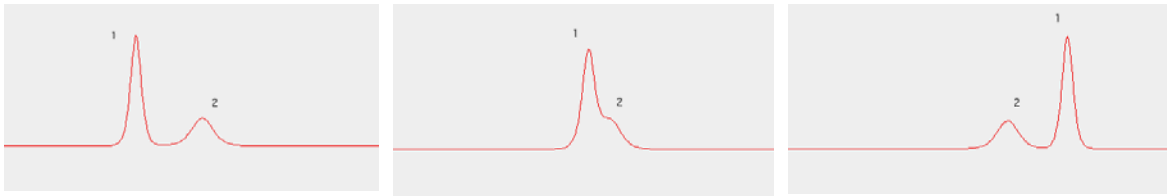
labor. The city, in fact, generated a distinct foundation for the implicit benefits and explicit opportunities of modern life. Concessions to, and state protections of, the public included the right to sell in the urban informal economy, access to affordable consumer goods in the vending economy, employment opportunities in government bureaucracies and in urban service economies, participation in urban consumer culture and leisure activities, and recourse to the state government through group organizations, such as homeowners' associations. Her research challenges these chronological assumptions by showing that many changes attributed to the Mexican Revolution had their roots in the political culture and popular activism of the late nineteenth-century city. Moreover, it suggests how in the 1920s, the post-revolutionary state, with its corporatist structure which solidified membership-based collective identities, became the effective means through which people looked to secure their local interests. Thus, Jiménez argues that Mexican nationalism emerged in cities in the 1910s, and 1920s largely as a by-product of localism.

Jiménez arrived at UCCS in fall 2000 after completing her Ph.D. in Latin American History at the University of California, San Diego. She teaches general and specific courses in Latin American and Latino History, several of which are cross-listed with the Ethnic Studies program. She has published articles in the Journal of Urban History, Urban History (forthcoming), and City (forthcoming). Her book manuscript has been solicited by several presses, including the University of North Carolina Press and Stanford University Press.

### *Solitons Make Waves ...*

Assistant Professor Radu C. Cascaval and Associate Professor Sarbarish Chakravarty, Department of Mathematics -- The modern theory of integrable systems dates back to 1954, when Fermi, Pasta, and Ulam performed their famous experiment in the Los Alamos Laboratories, observing an unexpected recurrence phenomenon in their numerical study of an an harmonic lattice. For the next 10 years, scientists attempted theoretical explanations of these experimental results, which were apparently in

contradiction with the ergodic theory prediction. The breakthrough explanation came in 1965 with the discovery of the solitons in a celebrated announcement by Kruskal and Zabusky. Solitons are special solutions of certain nonlinear partial differential equations. Imagine them as waves of translation that are also localized in space, hence the name solitary waves. Their hallmark behavior is that interaction between such waves preserves the shape of the interacting waves, even though the interaction is genuinely nonlinear. This prompts the analogy with particle behavior. The name 'soliton' illustrates both the solitary and the particle-like behavior of these special waves. Today, the existence of solitons has been confirmed in the most diverse scientific contexts, ranging from fluids and plasma physics to optics, biological and atmospheric phenomenon. Not only have solitons been shown to occur in hydrodynamics and nonlinear optics, they have also appeared in descriptions of plasmas, protein models, atmospheric events, magma flow, high energy physics and solid state physics.

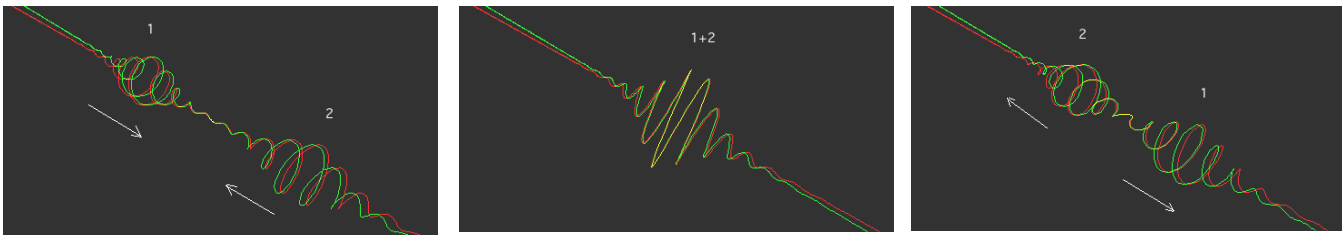


2-soliton interaction for the KdV equation

Most of the theoretical work in the field of integrable systems has initially been devoted to water waves, via the famous Korteweg-de Vries equation (KdV), first derived by Boussinesq (1875). Integrability of the Korteweg-de Vries equation is intimately related to the existence of the soliton solutions and means that the equation is completely solvable, i.e. all solutions can be found explicitly. This is accomplished by developing the so-called inverse scattering transform, a nonlinear analog of the Fourier transform for linear equations.

Since then, soliton behavior has been demonstrated in many other physical systems. A relevant example is light transmission in optical fibers (Zakharov & Shabat, 1972). Under a certain regime, light travels through long fibers according to the famous nonlinear Schrödinger equation (NLS) and hence NLS became another example of an 'exactly' integrable system. In general, it is extremely difficult to establish integrability of

a particular equation or system, to further complicate matters, experts around the world have been unable to agree upon a definition. Two major breakthroughs occurred when Peter Lax (1968) introduced the Lax Pair formalism to explain the integrability of KdV, and when Ablowitz, Kaup, Newell and Segur (1972) synthesized the exact nature of integrability for a large class of systems, including KdV and NLS, by introducing the AKNS system.



2-soliton interaction for the NLS equation (3D glasses recommended)

Two faculty members in the UCCS Math Department, Radu Cascaval and Sarbarish Chakravarty, have been active researchers in the field of integrable systems and nonlinear waves with a main interest on the developments mentioned above.

Cascaval has spent most of the last decade (starting with his doctoral years) working on various aspects of wave propagation governed by Korteweg-de Vries equation and its generalizations. Since then Radu has concentrated on extending the analysis to other integrable systems, such as the scalar and vector nonlinear Schrödinger equations (fig 1, 2). In addition, several classes of solitons that do not decay at infinity were investigated. Recently some applications to wave propagation in elastic tubes have revealed connections with previously studied systems, such as the Bousinesq system for two-way propagation. This is a promising new direction that has potential applications to modeling blood flow in the human arterial system (fig 7).

Chakravarty has worked for the past two decades on various aspects of soliton theory. He has studied systems that arise in mathematical physics, general relativity, and topological field theories. Sarbarish has also devoted a significant effort to the theory of fiber optics communications, studying optical solitons in periodically varying dispersion, i.e. dispersion-managed solitons (fig 3, 4, 5). Recently, a commercial soliton-based fiber-optic system has been installed across the continent of Australia. Another major effort has

been put in working with line-solitons that are known to arise in ocean waves and plasmas. In recent work, a complete characterization of the interacting line solitons in such systems has revealed exciting and unexpected new web-like structures (fig 6).

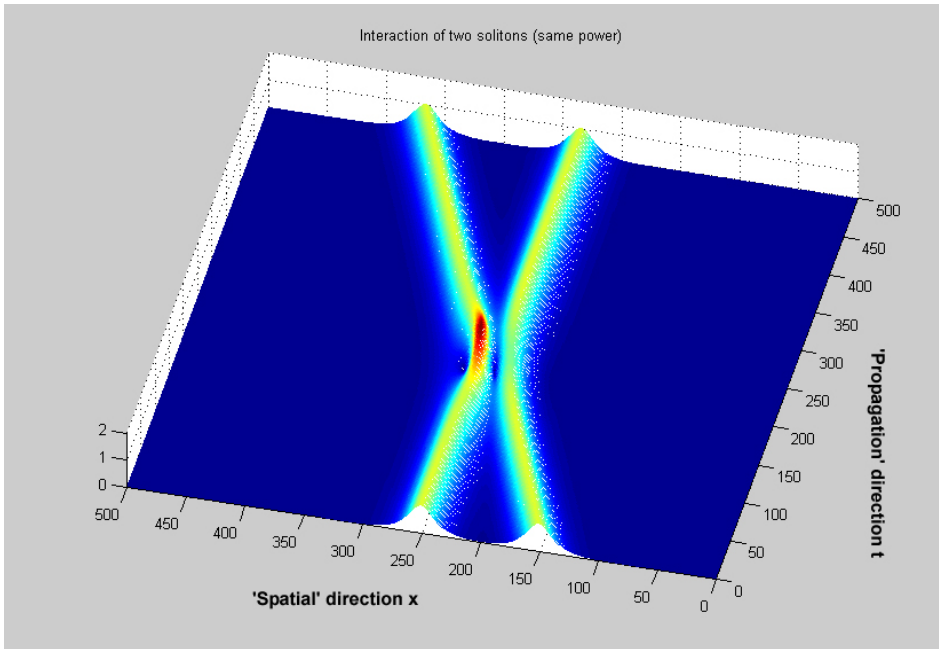
### **Soliton Conference at UCCS**

The year 2005 marks the 40th anniversary of the discovery of solitons by Kruskal and Zabusky. This and subsequent developments by Gardner, Greene, Kruskal and Miura in 1967, have provided the catalyst for an explosive development in the theory of nonlinear waves and its application to problems in physics, engineering and related areas. Such studies have been highly interdisciplinary, with theoretical results motivating experiments, and vice-versa.

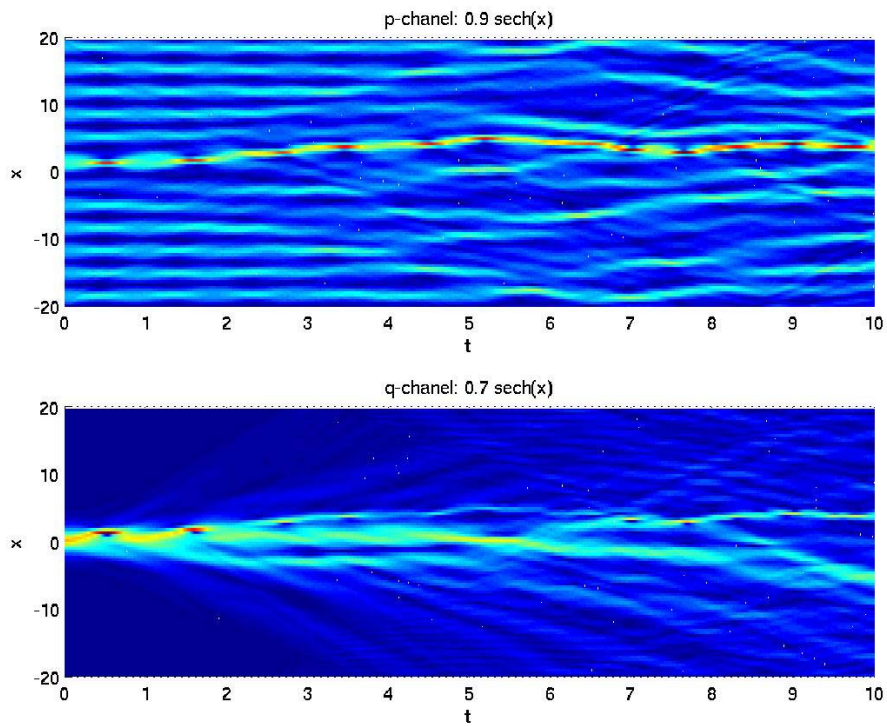
Currently, the Department of Mathematics at UCCS and the Applied Math Department at CU Boulder are organizing a major international conference on "Nonlinear Waves, Integrable Systems and Their Application". The conference will be held on the UCCS campus during June 4-7th, 2005 and on the CU Boulder campus on June 8th, 2005. As the title of the conference suggests, this will be a gathering of the major international figures in both theory and applications. It is anticipated that the conference will feature over 80 invited talks, approximately half of which will be given by leading scientists from Europe, Canada, Japan, and Australia.

Among the key speakers will be **Eric Cornell** (NIST and University of Colorado), the 2001 Nobel Prize winner in Physics; **Martin Kruskal** (Princeton and Rutgers), the 1993 National Medal of Science and 1994 John von Neumann Prize winner; and **Peter Lax** (Courant), the recently announced 2005 Abel Prize winner (Abel Prize is the most prestigious award in Mathematics, instituted in 2002 by the Norwegian Academy of Science and Letters). The list of participants also includes **Mark Ablowitz** (Boulder), **David Kaup** (Central Florida), **Alan Newell** (Arizona), and **Harvey Segur** (Boulder) and many more key players in the field.

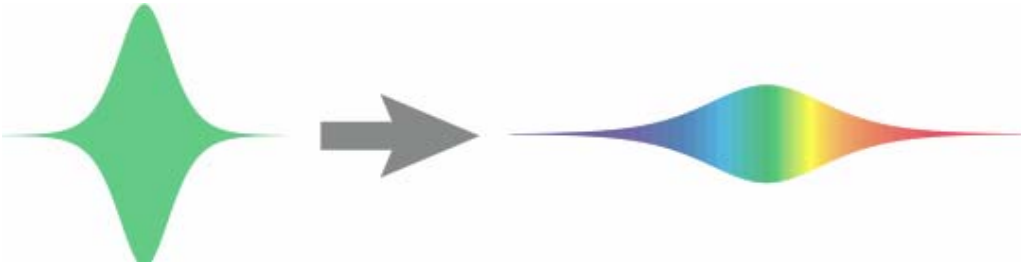
The conference speakers will report on the latest theoretical and experimental results in nonlinear waves, integrable systems and related applications. Because of the cross-disciplinary nature of the conference, experts will become aware of the latest work in fields related to, but different from their own. In addition, students and scientists will have the unique opportunity to gain key insights in their respective fields of research.



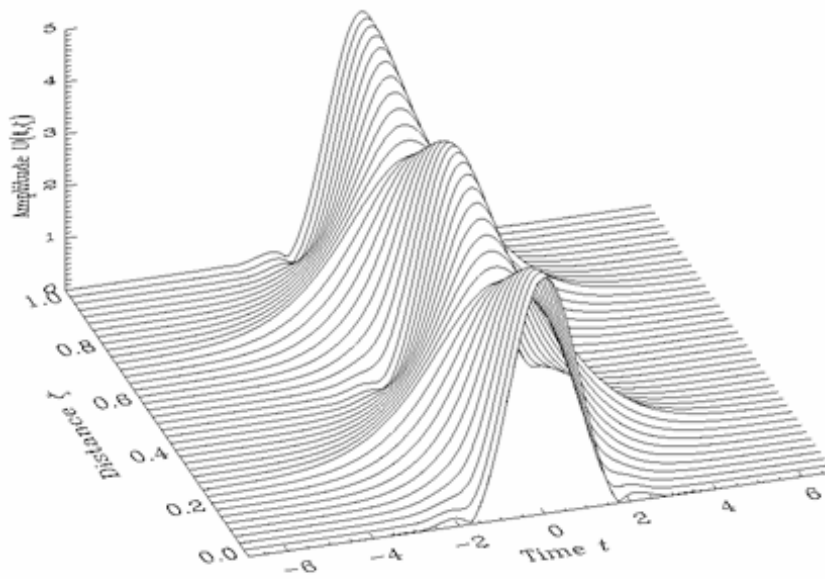
**Figure 1.** Soliton interactions for NLS equation



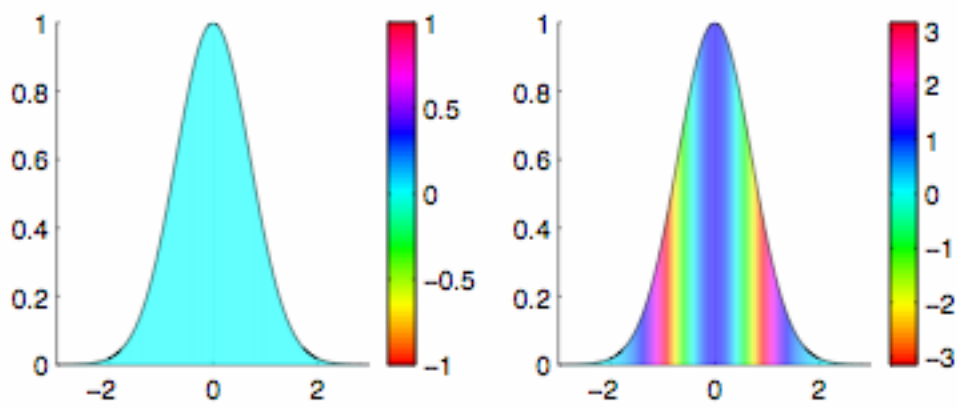
**Figure 2.** A soliton (light wave) propagating in birefringent medium (Manakov system) p-channel has periodic background; q-channel has zero background



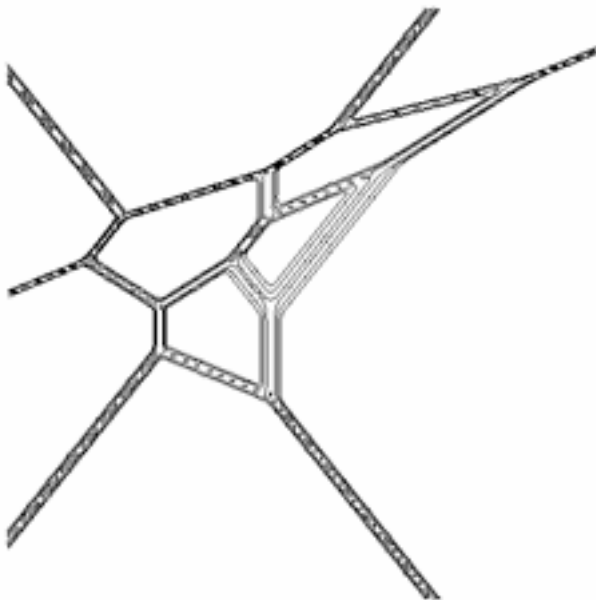
**Figure 3.** Dispersion managed soliton (phase modulation)



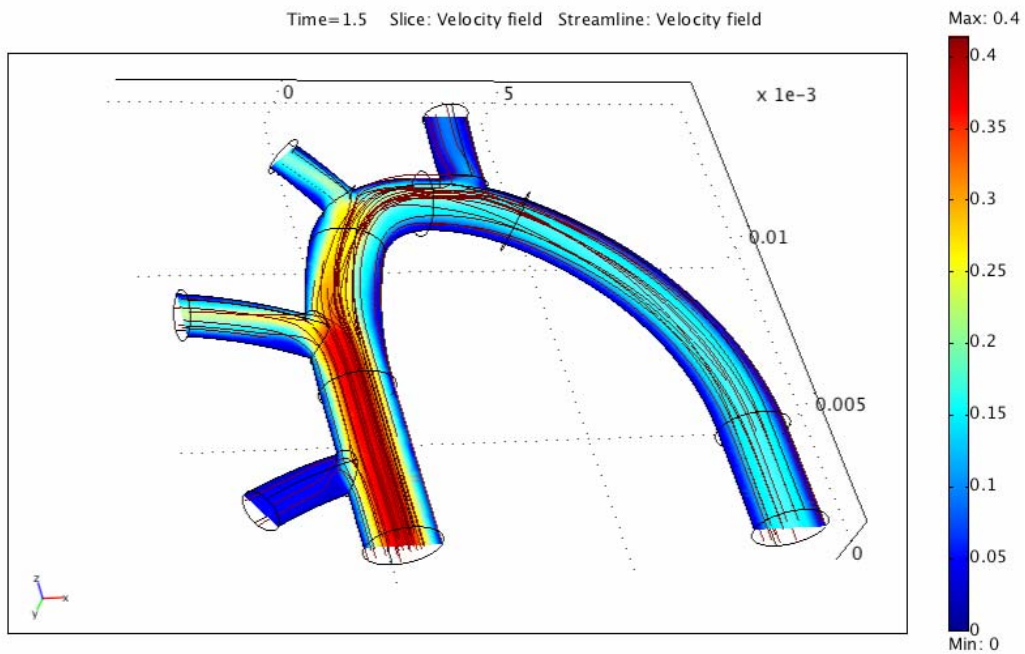
**Figure 4.** Dispersion managed soliton (amplitude modulation)



**Figure 5.** Self-phase modulating soliton



**Figure 6.** Interacting line solitons - web pattern



**Figure 7.** 3D Blood flow in the human aorta

### CU Trauma Studies

Associate Professor Charles Benight, Psychology -- Developed and run by Associate Professor Charles Benight, the University of Colorado, Colorado Springs Trauma Studies and Resource Center is a comprehensive center established in 2001 which focuses on research, intervention, and education around trauma. The Center is dedicated to achieving the following mission through multidisciplinary efforts: promote the advancement and exchange of knowledge about traumatic life experiences by obtaining grants through agencies such as the National Institute of Health and the National Science Foundation; enhance traumatic stress prevention efforts and education throughout the University and the Pikes Peak region through active outreach efforts with local agencies and schools; support public policy formulation on traumatic stress both locally and nationally by working in collaboration with the nationally recognized organizations on trauma; actively support innovative traumatic stress interventions through scientific exploration and

facilitate the availability of effective treatment for indigent people; and serve as a campus and Pikes Peak region resource center on trauma.



## CU-Trauma Studies and Resource Center

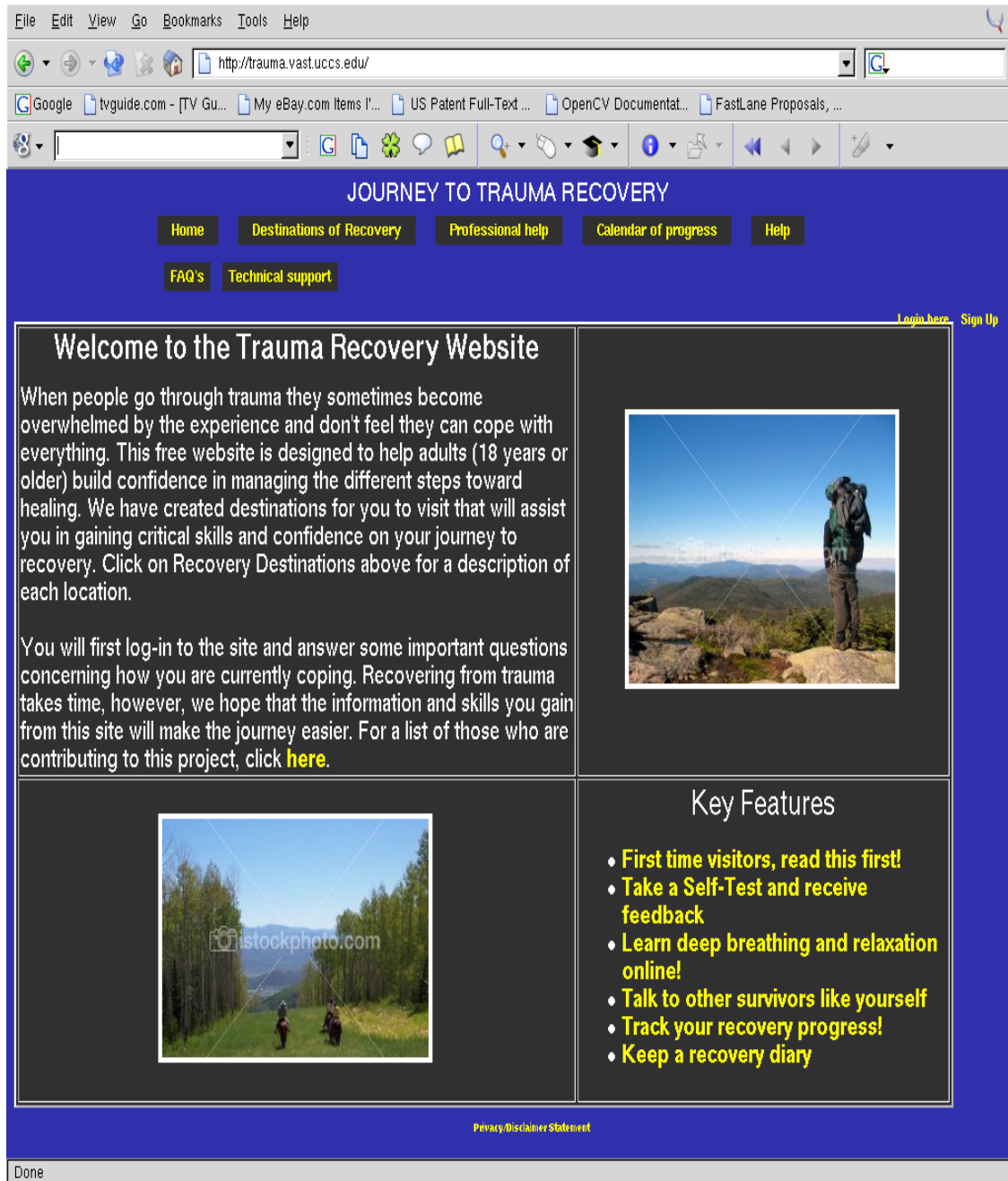
The Trauma Center has grown in size as well as its scope since its inception. In four years, the Center has grown from a few faculty with one or two graduate students to several faculty, a post-doctoral fellow, three graduate students, two undergraduate students, and several volunteers. The grant funding that has funneled through the Center has grown to over a half million dollars. The research is multidisciplinary and extremely varied with a common theme of trauma.

Dr. Charles “Chip” Benight, the Director of the CU-Trauma Studies and Resource Center and Associate Professor of Psychology, in a unique collaboration with Dr. Eve Gruntfest, Professor of Geography, received a grant worth \$422,000 from the National Science Foundation to study short-fuse weather disaster warnings (i.e., The Warning Project). Dr. Benight is applying his theoretical work on understanding the effects of psychological trauma with Dr. Gruntfest’s expertise in short-fuse weather disaster warnings to challenge the current practice of weather warnings being presented to the public in a “one size fits all” fashion. The grant builds on previous theoretical models for disaster response and introduces a new theoretical framework for understanding the broader warning process (e.g., from initial notification to long range outcomes). The project’s results will make two primary contributions. First, findings will offer new knowledge and theoretical development concerning how individuals respond to warnings incorporating the richness of psychology and geography. Second, the theoretical framework introduced will provide an opportunity to develop new approaches to warning system development and public education interventions. This grant will run through June 2006. A supplemental grant was also received through NSF to fund two exemplary under-represented undergraduate students to work on the project (\$15,000). Ms. Lindsey

Barnes and Mr. Maurice Thurman joined the project fall of 2004. For updates on the grant progress, please visit the CU-Trauma Studies and Resource Center website at <http://web.uccs.edu/cutrauma/>. Click on programs and follow Warning Project.

In another project, Dr. Benight is working collaboratively with Dr. Terry Boulton from the Computer Science Department, and colleagues at the National Center for Posttraumatic Stress Disorder in Palo Alto CA. to build a state of the art interactive multimedia website to help traumatized people. This website will serve as a method for empowering traumatized individuals during recovery. The implications for this site are virtually unlimited due to the boundlessness of the internet. The site is designed based on social cognitive theory to provide interactive feedback that utilizes multimedia approaches in order to boost the individual's sense of coping self-efficacy (i.e., self-empowerment). The research team has secured small pilot grant money through the Network Information and Space Security Center (NISSC) due to its potential use in the case of a terrorist attack. They have submitted multiple grants to the National Science Foundation and the National Institute of Justice to help fund the website development equaling over a million dollars.

Several thesis projects are planned to provide initial tests for the website this summer. The first will look at the usefulness of the site with individuals struggling with domestic violence. This is a collaborative project with T.S.S.A., the domestic violence center in Colorado Springs and will be headed by Noelle Balliett, a graduate student in Experimental Psychology. The second will be working with individuals coping with cancer led by Miranda Kucera, a graduate student in Clinical Psychology.



Front Page of “Journey To Trauma Recovery” Website

Another project that is run through the CU-Trauma Studies and Resource Center is the Peer Support program for Emergency Workers. This program was developed in 2003 and has served as a training program for the UCCS Public Safety Department and the Colorado Springs Fire Department. The Center has already trained over twenty Emergency Services professionals in peer support. The purpose of a Peer Support

program is to provide a certificate training program to personnel who are available to offer confidential help and guidance to emergency worker staff and their families during a personal or professional crisis. It is an approach supported by both the employing agency and unions to deal with job and life stressors. It fills a need in providing a service to increase employee well-being, productivity, and retention. It provides a way to confidentially “talk out” any problems with trained co-workers. Peer Supporters are volunteers from all ranks within an agency. A week long course provided by Dr. Benight, Tina Markowski, and Rhonda Williams (Assistant Professor in Counseling Education) is designed to teach techniques in recognizing traumatic distress, stress management, and one-on-one counseling skills. For more information on the course please go to: [http://web.uccs.edu/cutrauma/Peer\\_Support.htm](http://web.uccs.edu/cutrauma/Peer_Support.htm). In addition, Dr. Benight is currently heading a randomized controlled trial comparing peer support with critical incident stress debriefing in the Colorado Springs Fire Department. This study is funded also through the NISSC and will run until sometime in 2006.

## ***Major Publications of the Faculty***

### **Books Fully Authored**

#### *College of Business*

Davis, A., Great Software Debates, IEEE Computer Society Press and John Wiley and Sons, 2004.

#### *College of Education*

Martin, J. S., L. Huber Marshall, D. Wray, L. Wells, J. O'Brien, G. Olvey, and Z. Johnson, Choose and Take Action: Finding the Right Job for You, Sopris West Educational Services, Longmont, CO, 2004.

#### *College of Letters, Arts, and Sciences*

Hackman, M.Z., and C.E. Johnson, Leadership: A Communication Perspective [4th ed.], Waveland Press, Long Grove, IL, 2004.

Schoffstall, A. M. and B.A. Gaddis, with M.L. Druelinger, Microscale and Miniscale Organic Laboratory Experiments [2<sup>nd</sup> ed.], McGraw-Hill, 2004.

Schoffstall, A. M., B.A. Gaddis and C.S. Pitman, Microscale and Miniscale Organic Laboratory Experiments, Instructor s Manual and Solutions Guide [2<sup>nd</sup> ed.], McGraw-Hill, 2004.

### **Archival Journal Articles Authored**

#### *Beth El College of Nursing and Health Science*

Nelson, J.P., "Professional Nurses Value Research," *The Student Voice*, Vol. 1, No. 2. 2004.

#### *College of Business*

Basili, V., B. Boehm, A. Davis, W. Humphrey, N. Leveson, N. Mead, J. Musa, D. Parnas, S. Pfleeger, and E. Weyuker, "New Year's Resolutions for Software Quality," *Quality Time Column*, J. Hayes, ed., *IEEE Software*, Vol. 21, No.1 (January/February 2004), pp. 12-13.

Boykin, R.F. and W.B. Martz, Jr., "ERP Curriculum: A Test for Process Orientation," *Journal of Enterprise Information Management*, Vol. 17, No. 1, 2004, pp. 45-55.

Chaitanya, S., R. Shelor, J. Jiang and G. Klein, "Rental Software Valuation in IT Investment Decisions," *Decision Support Systems*, Vol. 38, No. 1, 2004, pp. 115-130.

Corsten, D. and T.W. Gruen, "Stock-Outs Cause Walkouts," *Harvard Business Review*, 2004, pp. 26-28

Dupre, K. and T.W. Gruen, "The Use of Category Management Practices to Obtain a Sustainable Competitive Advantage in the Fast-Moving-Consumer-Goods Channel," *Journal of Business and Industrial Marketing*, Vol. 19, No. 7, 2004, pp. 444-459.

Duray, R., "Mass Customizers Use of Inventory, Planning Techniques and Supply Chain Integration," *Production Planning and Inventory Control*, Vol.15, No. 4, 2004.  
Davis, A., "A Trip to Africa," *IEEE Software*, Vol. 21, No. 2 (March/April 2004), pp. 97-99.

Gardner, D.G., L. Van Dyne, and J.L. Pierce, "The Effects of Pay Level on Organization-Based Self-Esteem and Performance: A Field Investigation," *Journal of Occupational and Organizational Psychology*, Vol. 77, 2004, pp. 1-16.

Hickey, A., and A. Davis, "A Unified Model of Requirements Elicitation," *Journal of Management Information Systems*, Vol. 20, No. 4, 2004, pp. 65-84.

Jiang, J.J., M. Zhong, G. Klein and H.G. Chen, "Nonstationary Brand Variables in Category Management: a Cointegration Perspective," *Decision Sciences*, Vol. 35, No. 1, 2004, pp. 101-120.

Martz, W. B., Jr., and M. Shepherd, "Group Consensus: The Impact of Multiple Dialogues," *Group Decision and Negotiation*, Vol. 13, pp. 315-325.

Neil, T., W.B. Martz, Jr. and A. Biscaccianti, "Historical Success, Feedback and a Finite Resource," *Management Decision*, Vol. 41, No. 1, 2004, pp. 41-54.

Pierce, J.L., and D.G. Gardner, "Self-Esteem within the Work and Organizational Context: A Review of the Organization-Based Self-Esteem Literature," *Journal of Management*, Vol. 30, 2004, pp. 591-622.

Schornack, G.R. and C.E. Beck, "Costing Distance Ed: Experience Based Practices," *Journal of Business and Economics Research*, Vol. 1, No. 6, May, 2003, pp. 27-41.

Schornack, G.R. and C.E. Beck, "Wireless Technologies for Marketing and Management Professionals," *The Journal of Applied Business Research*, Vol. 20, No. 4, 2004, pp. 1-10.

Shepherd, M., W.B. Martz, Jr., J. Ferguson, and G. Klein, "A Survey of Distance Education Programs," *Education Innovations in Economics and Business*, Vol. 9.

College of Engineering and Applied Sciences

Arnold, D., M. Dugas and K.M. Rangaswamy, "Torsion-Free Modules of Finite Rank over a Discrete Valuation Domain," *Journal of Algebra*, Vol. 272, No. 2004, pp 456 – 469.

Augusteijn, M.F. and T.P. Harrington, "Evolving Transfer Functions for Artificial Neural Networks," *Neural Computing and Applications*, Vol. 13, 2004, pp 38-46.

Binglong X., V. Ramesh and T. Boulton, "Sudden Illumination Change Detection using Order Consistency," *Image and Vision Computing*, Vol. 22, No. 2, 2004, pp. 117-125.

Boulton, T.E., X. Gao, R. Micheals, and M. Eckmann, "Omni-Directional Visual Surveillance," *Image and Vision Computing*, Vol. 22, No. 7, 2004, pp. 515-534.

Carlson, R., "Spectral Theory and Spectral Gaps for Periodic Schrodinger Operators on Product Graphs," *Waves Random Media*, Vol. 14, No. 1, 2004, pp. S29-S45.

Cascaval, R.C. "Local and Global Well-Posedness for a Class of Nonlinear Dispersive Equations," *Advances in Differential Equations*, Vol. 9, Numbers1/2, 2004, pp 85-132.

Cascaval, R.C., and F. Gesztesy, "J-Self-Adjointness of a Class of Dirac-Type Operators," *Journal Math. Anal. Appl*, Vol. 294, 2004, pp 113-121.

Cascaval, R.C., F. Gesztesy, Y. Latushkin, and H. Holden, "Spectral Analysis of Darboux Transformations for the Focusing NLS Hierarchy," *Journal d'Analyse Mathematique*, Vol. 93, 2004, pp 139-198.

Chambers, M.B., and S. So, "Full-Text Aggregator Database Vendors and Journal Publishers: A Study of a Complex Relationship," *Serials Review*, Vol. 30, No. 3, 2004, pp.183-193.

Chow, C. E., Y. Cai, D. Wilkinson and G.K. Godavari, "Secure Collective Defense System," *Proceedings of GLOBECOM 2004*, Vol. 4, 2004, pp. 2245 – 2249.

Chow, C. E., P.J. Fong and G.K. Godavari, "An Exercise in Constructing Secure Mobile Ad hoc Network (SMANET)," *Proceedings of The 18th International Conference on Advanced Information Networking and Applications*, Vol. 2, 2004, pp. 436 – 438.

Cramer, N., E. Philofsky, L. Kammerdiner and T.S. Kalkur, "Low Temperature Sputter Deposition of BCTZ Films," *Applied Physics Letters*, Vol. 84, No. 771, 2004.

Cramer, N., T.S. Kalkur, E. Philofsky and L. Kammerdiner, "Vector Network Analyzer

- Characterization of Planar Capacitors with high-K Dielectrics," *Integrated Ferroelectrics*, Vol.66, 2004, pp. 171-178.
- Daly, J.E. and S. Fridli, "Translation Invariant Operators on Hardy Spaces over Vilenkin Groups," *Acta Mathematica Academiae Paedagogicae Nyiregyhaziensis*, Vol. 20, No. 2, 2004, pp. 131-140.
- Dugas, M., and K.M. Rangaswamy, "Stacked Bases Theorem for Butler Groups" *Forum Math.*," Vol. 16, 2004, pp. 223 - 230
- Jamil, A., T.S. Kalkur and N. Cramer, "Verilog-A Modeling of Ferroelectric High-K Capacitors for Tunable Circuit Applications," *Integrated Ferroelectrics*, Vol. 66, 2004, pp. 163-171.
- Kim, D., D. Killingsmith, D. Dalton, K. Dimmler, V. Volariu, F.Gnadinger, T.S. Kalkur, A Mahmud and M. Rahman, "C-Oriented MOCVD YMNO<sub>3</sub> Thin Film and its Electrical Characteristics in MFIS 1-T FRAM," *Integrated Ferroelectrics*, Vol.68, 2004, pp. 68-76.
- Luck, R. and J.W. Stevens, "A Simple Numerical Procedure for Estimating Non-linear Uncertainty Propagation," *ISA Transactions*, Vol 43, No. 4, 2004, pp 491-497.
- Mahmud, A., T.S. Kalkur and N. Cramer, "An Active Phase Shifter using Tunable Ferroelectric Capacitor," *Integrated Ferroelectrics*, Vol.66, 2004, pp.153-160.
- Nayar, S.K., V. Branzoi and T. E. Boulton, "Programmable Imaging using a Digital Micromirror Array", *IEEE Conf. on Computer Vision and Pattern Recognition*, Winner: Best paper Award. Vol. 1, 2004, pp. 436-443.
- Plett, G., "High-Performance Battery-Pack Power Estimation Using a Dynamic Cell Model," *IEEE Transactions on Vehicular Technology*, Vol. 53, No. 5, September 2004, pp. 1586–93.
- Plett, G., "Extended Kalman Filtering for Battery Management Systems of LiPB-Based HEV Battery Packs—Part 1: Background," *Journal of Power Sources*, Vol. 134, No. 2, August 2004, pp. 252–61.
- Plett, G., "Extended Kalman Filtering for Battery Management Systems of LiPB-Based HEV Battery Packs—Part 2: Modeling and Identification," *Journal of Power Sources*, Vol. 134, No. 2, 2004, pp. 262–76.
- Plett, G., "Extended Kalman Filtering for Battery Management Systems of LiPB-Based HEV Battery Packs—Part 3: State and Parameter Estimation," *Journal of Power Sources*, Vol. 134, No. 2, 2004, pp. 277–92.
- Rangaswamy, K.M., "Stacked Bases Theorem for Butler Groups," *Forum Math.*, Vol. 16, 2004, pp. 223 – 230.

- Son, S., "Circular summations of theta functions in Ramanujan's Lost Notebook," *The Ramanujan Journal*, Vol. 8, No. 2, 2004, pp. 235-272.
- Sun, S. and T.S. Kalkur, "A 9-Bit Bipolar Polarization –Switching Digital to Analog Converter Based on Ferroelectric Capacitors," *Integrated Ferroelectrics*, Vol.67, 2004 pp. 213-221.
- Sun, S. and T.S. Kalkur, "Modeling of Charge Switching in Ferroelectric Capacitors," *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 51, No. 7, 2004, pp. 786-793.
- Wei, J., C.Z. Xu and X. Zhou, "A Robust Packet Scheduling Algorithm for Proportional Delay Differentiation Services," *Proceedings of the 47<sup>th</sup> IEEE International Conference on Global Telecommunications, IEEE Communication Society*, 2004, pp. 697-701.
- Wiener, R., "Some Examples of Generics in Java 1.5 and C# 2.0," *Journal of Object Technology*, Vol. 3, No. 8, 2004, pp. 81-96.
- Wilkinson, D., C.E. Chow and Y. Cai, "Enhanced Secure Dynamic DNS Update with Indirect Route," *Proceedings of fifth IEEE Systems, Man and Cybernetics Information Assurance Workshop*, 2004, pp. 335-341.
- Zhang, Y. and L.E. Owen, "Systematic Validation of a Microscopic Traffic Simulation Program," *Transportation Research Record*, 2004, pp.112-120.
- Zhang, Y., "On the Infinite Differentiability of the Right Edge in the Supercritical Oriented Percolation," *Stochastic Processes and Their Applications*, Vol.114, No. 2, 2004, pp. 279-286.
- Zhou, X., and C.Z. Xu, "Harmonic Proportional Bandwidth Allocation and Scheduling for Service Differentiation on Streaming Servers," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 15, No. 9, 2004, pp. 835-848.
- Zhou, X., J. Wei and C.Z. Xu, "Modeling and Analysis of 2D Service Differentiation on an E-Commerce Server," *Proceedings of the 24th IEEE International Conference on Distributed Computing Systems, IEEE Computer Society*, 2004. pp. 740-747.
- Zhou, X., J. Wei and C.Z. Xu, "Processing Rate Allocation for Proportional Slowdown Differentiation on Internet Servers," *Proceedings of the 18th IEEE International Parallel and Distributed Processing Symposium, IEEE Computer Society*, 2004. pp. 88-97.
- Zhou, X., Y. Cai, G.K. Godavari and C.E. Chow, "An Adaptive Process Allocation Strategy for Proportional Responsiveness Differentiation on Web Servers," *Proceedings of the 2nd IEEE International Conference on Web Services, IEEE Computer Society*, 2004, pp.142-149.

College of Letters, Arts, and Sciences

Auther, E., "The Decorative, Abstraction, and the Hierarchy of Art and Craft in the Art Criticism of Clement Greenberg," *Oxford Art Journal*, Vol. 27, No. 3, 2004. pp. 339-364.

Banaszak, R.A., S.A. Arbaugh, E.D. Steffee and R. Pyati, "Investigation of Methanol Permeability and Ionic Conductivity of EMI+-doped Nafion Membranes," *Journal of the Electrochemical Society*, Vol. 151, No. 7, 2004, pp. A1020-A1023.

Benight, C.C., A.S. Harding-Taylor, A.M. Midboe and R.L. Durham, "Development and Psychometric Validation of a Domestic Violence Coping Self-efficacy Measure," *Journal of Traumatic Stress*, Vol. 17, No. 6, 2004, pp. 505-508.

Benight, C.C. and A. Bandura, "Social Cognitive Theory of Posttraumatic Recover: the Role of Perceived Self-efficacy," *Behavior Research and Therapy*, Vol. 42, No. 10, 2004, pp. 1129-1148.

Bock, F.X., T.M. Christensen, S.B. Rivers, L. Doucette and R.J. Lad "Growth and Structure of Silver and Silver Oxide Thin Films on Sapphire," *Thin Solid Films*, Vol. 468, 2004, pp. 57-64.

Choi, Y, D. Haskel, R.E. Camley, D.R. Lee, J.C. Lang, G. Srajer, J.S. Jiang and S.D. Bader, "Temperature Evolution of the Gd Magnetization Profile in Strongly Coupled Gd/Fe Multilayers," *Physical Review B*, Vol. 70, No. 13, 2004, p. 134420-1-10.

Cohen, F., S. Solomon, M. Maxfield, T. Pyszczynski and J. Greenberg, "Fatal Attraction: the Effects of Mortality Salience on Evaluations of Charismatic, Task-oriented, and Relationship-oriented Leaders," *Psychological Science*, Vol. 15, No. 12, 2004, pp. 846-851.

Coolidge, F.L. and T. Wynn, "A cognitive and neuropsychological perspective on the Châtelpernonian." *Journal of Anthropological Research*, Vol. 60, 2004, pp. 55-73.

Coolidge, F.L., J.W. DenBoer and D.L. Segal, "Personality and Neuropsychological Correlates of Bullying Behavior," *Personality and Individual Differences*, Vol. 36, 2004, pp. 1559-1569.

Coolidge, F.L., D.L. Segal, C.C. Benight and J. Danielian, "The Predictive Power of Horney's Psychoanalytic Approach: An Empirical Study," *American Journal of Psychoanalysis*, Vol.64, 2004, pp. 363-374.

Eberhart, J.G., "The Two-by-Two Array: An Aid in Conceptualization and Problem Solving," *Mathematics and Computer Education Journal*, Vol. 38, No. 1, 2004, pp. 92-96.

Ellis, K., "The Impact of Perceived Teacher Confirmation on Receiver Apprehension, Motivation, and Learning," *Communication Education*, Vol. 53, No. 1, January 2004, pp. 1-20.

Fico, F., J.D. Richardson and S.M. Edwards, "Influence of Story Structure on Perceived Story Bias and News Organization Credibility," *Mass Communication and Society*, Vol. 7, 2004, pp. 301-318.

Gilstrap, L.L. "A Missing Link in Suggestibility Research: What is Known about the Behavior of Field Interviewers in Unstructured Interviews with Young Children?," *Journal of Experimental Psychology: Applied*, Vol.10, 2004, pp.13-24.

Gilstrap, L.L. and P.B. Papierno "Is the Cart Pushing the Horse? The Effects of Child Characteristics on Children's and Adults' Interview Behaviors," *Applied Cognitive Psychology; Special edition: Individual and developmental differences in suggestibility*, Vol. 18, 2004, pp. 1059-1078.

Grimsditch, M., G.K. Leaf, H.G. Kaper, D.A. Karpeev and R.E. Camley, "Normal Modes of Spin Excitations in Magnetic Nanoparticles," *Physical Review B*, Vol 69, 2004, pp. 174428-1 to1744828-12.

Hackman, M.Z., A.K. Kirilin and J.L. Tharp, "Prescriptive Leadership Development," *Journal of Leadership Education*, Vol. 3, 2004, pp. 1-9.

Herrera, A., D. Samuels and A. Ferber, "Introducing the Concepts of Privilege and Oppression into the Classroom," *Race, Gender, & Class: American Sociological Association*, Vol. 10, No.4, 2004, pp. 5-21.

Holder, C.D., "Rainfall Interception and Fog Precipitation in a Tropical Montane Cloud Forest of Guatemala," *Forest Ecology and Management*, Vol. 190, No. 2/3, 2004, pp. 373-384.

Holder, C.D., "Changes in Structure and Cover of a Common Property Pine Forest in Guatemala, 1954-1996," *Environmental Conservation*, Vol. 31, No. 1, 2004, pp. 22-29.

Huber, T.P., "Spectral Signatures in the Classroom," *Journal of Geography*, Vol.103, No. 1, 2004, pp. 38-42.

James, L.E., "Meeting Mr. Farmer vs. Meeting a Farmer: Specific Effects of Aging on Learning Proper Names," *Psychology and Aging*, Vol. 19, September 2004. pp. 515-522.

Kisley, M.A., T.L. Noecker and P.M. Guinther, "Comparison of Sensory Gating to Mismatch Negativity and Self-reported Perceptual Phenomena in Healthy Adults," *Psychophysiology*, Vol. 41, No. 4, 2004, pp. 604-612.

Kisley, M.A., D.B. Davalos, H.S. Layton, D. Pratt, J.K. Ellis and C.A. Seger, "Small Changes in Temporal Deviance Modulate Mismatch Negativity Amplitude," *Neuroscience Letters*, Vol. 358, No. 3, April 1, 2004, pp. 197-200.

Kuanr, B.K., R.E. Camley and Z. Celinski, "Relaxation in Epitaxial Fe Films Measured by Ferromagnetic Resonance," *Journal of Applied Physics*, Vol. 95, No. 11 II, 2004, pp. 6610-6612.

Kuanr, B.K., R.E. Camley and Z. Celinski, "Effect of Shape Anisotropy on Stop-Band Response of Fe and Permalloy Based Tunable Microstrip Filters," *IEEE Transactions on Magnetics*, Vol. 40, No. 4, pt.2, 2004, pp. 2841-2843.

Landau, M.J., M. Johns, J. Greenberg, T. Pyszczynski, A. Martens, J.L. Goldenberg and S. Sheldon, "A Function of Form: Terror Management and Structuring the Social World," *Journal of Personality and Social Psychology*, Vol. 87, No. 2, 2004, pp. 190-210.

Landau, M.J., S. Solomon, J. Greenberg, F. Cohen, T. Pyszczynski, T., J. Arndt and C.H. Miller, "Deliver Us from Evil: the Effects of Mortality Salience and Reminders of 9/11 on Support for President George W. Bush," *Personality and Social Psychology Bulletin*, Vol. 30, No. 9, 2004, 1136-1150.

Malkinski, L., W.L. Zhou, J. He, Z. Celinski, R.E. Camley, R.T. O'Keevan, J. Yano, T. Pivoda, A. Vovk, M. Hecker, M.C.M. Schneider, J. Szade and D. Skrzypek, "Microstructure and Magnetic Properties of Fe/KCoF<sub>3</sub> Thin Films," *Journal of Magnetism and Magnetic Materials*, 2004, pp.272-276, Suppl. 1, pp. e901 - e903.

MacAulay, S. P., "Diaspora by Degree: Narrative and Performance in Interviews of Expatriates from Wanganui, New Zealand," *Journal of American Folklore*, Vol. 117, No. 465, Summer 2004, pp. 262-287.

Myers, B. and E. Greene, "The Prejudicial Nature of Victim Impacts Statements: Implications for Capital Sentencing Policy," *Psychology, Public Policy, and Law*, Vol. 10, No. 4, 2004, pp. 492-515.

Newell, M.K., R. Melamede, E. Villalobos-Menuey, D. Swartzendruber, R. Trauger, R.E. Camley and W. Crisp, "The Effects of Chemotherapeutics on Cellular Metabolism and Consequent Immune Recognition," *Journal of Immune Based Therapies and Vaccines*, Vol. 2, No. 3, 2004.

Richardson, J.D. and Lancendorfer, K.M., "Framing Affirmative Action: The Influence of Race on Newspaper Editorial Responses to the University of Michigan Case," *Harvard International Journal of Press/Politics*, Vol.9, No. 4, 2004, pp. 74-94.

Richardson, J.D., "Isolating frequency scale effects on self-reported loneliness," *Personality and Individual Differences*, Vol. 36, 2004, pp. 236-244.

Segal, D.L., M.S. Mincic, F.L. Coolidge and A. O'Riley, "Attitudes Toward Suicide and Suicidal Risk among Younger and Older Persons," *Death Studies*, Vol. 28, 2004, pp.671-678.

Soifer, A. and S. Shelah, "How the Axiom of Choice Can Affect the Chromatic Number of Distance Graphs: Three Examples on the Plane," *Congressus Numerantium*, Vol.166, 2004, pp. 5-9.

Soifer, A., "A Journey from Ramsey Theory to Mathematical Olympiad to Finite Projective Planes," *Mathematics Competitions*, Vol. 17, No. 2, 2004, pp. 8-16.

Soifer, A. and S. Shelah, "Axiom of Choice and Chromatic Number: Examples on the Plane," *Journal of Combinatorial Theory, Series A*, Vol. 105, No. 2, 2004, pp. 359-364.

Soifer, A., "Khromaticheskoe Chislo Ploskosti: Ego Proshloye, Nastoyashchee I Budushchee (Chromatic Number of the Plane: Its Past, Present and Future)," *Matematicheskoye Prosveshchenie (Mathematical Enlightenment)*, Ser. 3, Issue 8, 2004, pp. 186-221.

Steen, M.S.G., "Triumph of the Cultural Canon in El 'Mismo Mar de Todos los Veranos'," *Confluencia-Revista Hispanica de Cultura y Literatura*, Vol. 20, No. 1, 2004, pp. 55-62.

Wynn, T. and F.L. Coolidge, "The Expert Neandertal Mind," *Journal of Human Evolution*, Vol. 46, 2004, pp. 467-487.

Wynn, T., "Comment on "The Large Cutting Tools from the South African Acheulean and the Question of Social Traditions," by J. McNabb, F. Binyon, and L. Hazelwood. *Current Anthropology*, Vol. 45, 2004, pp. 672-673.

Zook, N.A., D.B. Davalos, E.L. DeLosh and H.P. Davis, "Working Memory, Inhibition, and Fluid Intelligence as Predictors of Performance on Tower of Hanoi and London Tasks," *Brain and Cognition*, Vol. 56, No. 3, 2004, pp. 286-292.

#### Graduate School of Public Affairs

Klingner, D. and L. Jones, "Smart Practice Development Administration in Iraq and other High Security Risk Nations: Lessons from Colonial Experience," *International Public Management Review*, Vol. 5, No. 1, 2004, pp. 41-57.

Klingner, D., "Preface to the Special Issue on Emerging Perspectives on Development Management," *International Public Management Journal*, Vol. 7, No. 2, 2004, pp. 143-148.

Klingner, D. "Globalization, Governance and the Future of Public Administration: Can We Make Sense Out of the Fog of Rhetoric Surrounding the Terminology?," *Public Administration Review*, Vol. 64, No. 6, 2004, pp. 686-692.

## Library

Byerley, S.L. "Teaching Basic Information Literacy Skills Online," *Academic Exchange Quarterly*, Vol. 8, No. 4, 2004, pp. 257-261.

Chambers, M.B. and S. So, "Full-text Aggregator Database Vendors and Journal Publishers: A Study of a Complex Relationship," *Serials Review*, Vol. 30, No. 3, 2004, pp. 183-193.

## **Creative Works**

### College of Letters, Arts and Sciences

Brodar, V.A., "These Five Ways of Being," *Northwest Annual, Center on Contemporary Art*, Seattle, WA, 2004.

Brodar, V.A., "That Puzzle of Comfort," *Return of the Storytellers, Artspace 7*, Lakewood, CO, 2004.

Brodar, V.A., "Sanctuary 2," *+Gallery*, Denver, CO, 2004.

Brodar, Valerie A., "Sanctuary," *Colorado 2004: Exhibition of Contemporary Art*, The Colorado Springs Fine Arts Center, Colorado Springs, CO, 2004.

## **Fellowships**

Auther, E., The J. Paul Getty Postdoctoral Fellowship in the History of Art and Humanities, for work on Material Matters: Art World Boundaries and the Elevation of Fiber in American Art of the 1960s and 70s.

Laroche, R., Short-term Folger Shakespeare Library Fellowship.

Laroche, R., Elizabethan Club Fellowship at the Beinecke Rare Book and Manuscript Library.

Laroche, R., Evelyn S. Nation and Andrew W. Mellon Fellow at the Huntington Library.

LaSala, K. American Association of Colleges of Nursing: Leadership for Academic Nursing Fellowship

## ***Masters Theses and Doctoral Dissertations Published***

### ***Summer 2004 Master Theses***

#### **Theses**

##### *EAS-Computer Science*

Abraham, Andrew, "Image View Shift: Three-Dimensional Representation from a Photo."

Advisor: C. Chow

Chandrashekar, Kaushal S, "Cellular Automata for 3D Morphing."

Advisor: C. Chow

##### *LAS-Geography*

Samy, Shar, "A Temporal/Spatial Characterization of HAPs in the Central Colorado Springs Airshed."

Advisor: Tom Huber

##### *LAS-Psychology*

Rains, Jenny R., "The Place of Supplemental, Multi-Sensory Materials in Elementary Mathematics."

Advisor: Hasker Davis

##### *LAS-Biology*

Van Dyke, Kristine Kirsch, "Chlamydomonas Reinhardtii Uncoupling Protein: Gene Isolation and Expression of its Fusion Protein."

Advisor: Sandy Berry-Lowe

Tillman, James E., "A Small Mammal Survey to Evaluate the Habitat Diversity on a Cattle Ranch in Elbert County, Colorado."

Advisor: Jon Pigage

### ***Fall 2004 Masters Theses & Dissertations***

#### **Dissertations**

##### *EAS-Electrical Engineering*

Bunnjaweht, Dahmmaet, "On the Investigation of Physical Layer Multiple Path Connections in a Wireless Network."

Advisor: Mark Wickert

Chayratsami, Porn, "Intercarrier Interference Mitigation Techniques for Orthogonal Frequency Division Multiplexing (OFDM) System."  
Advisor: Mark Wickert

Mathurasai, Tanawat, "Vector Error Correction of Time Domain Waveforms in a Vector Network Analyzer Employing Digital Modulation."  
Advisor: Mark Wickert

Stallard, Charlie, "Long-Range Prediction Techniques for Mobile Wireless Channels."  
Advisor: T.S. Kalkur

### **Masters Theses**

#### *EAS-Computer Science*

Ferrao, Patricia, "Secure Collaborative Web Browsing and Chat Through Standard Web Pages."  
Advisor: Robert Sebesta

Vinton, Peter, "Information Visualization Engine."  
Advisor: Robert Sebesta

#### *EAS-Electrical & Computer Engineering*

Hernandez, Adrian, "Dynamic Probe Trace Core for SoCs."  
Advisor: T.S. Kalkur

Le Sage, John, "A Voltage Controlled Oscillator Using Tunable Ferroelectric Capacitors."  
Advisor: T.S. Kalkur

Perkins, Roger, "Application of Adaptive Inverse Control to Linear MIMO Systems."  
Advisor: Greg Plett

Seil, Michael, "Adaptive Neural Network Control of Cylinder Position Utilizing Digitally Latching Pneumatic Poppet Valves."  
Advisor: Greg Plett

#### *LAS-Geography*

Andrew-Hoeser, Kristen A., "Physiographic Plant Geography of the Colorado Springs Foothills Area in CO."  
Advisor: John Harner

Carlson, Troy, "Recreational Land Use Planning & Conflict Mitigation with the Incorporation of Geographic Information Systems & Image Processing."  
Advisor: John Harner

Kogan, Linda Gail, "Measuring Institutional Sustainability: The Ecological Footprint of the University of Colorado at Colorado Springs."  
Advisor: John Harner

LAS-Psychology

Christianson, Sara Maria, "Children's Conception of Domestic Violence."  
Advisor: Sandy Wurtele

LAS-Sociology

Harner, Lisa, "Food Vices Women's Suppressed Voices."  
Advisor: Richard Dukes

***Spring 2005 Master Theses & Dissertations***

**Dissertations**

EAS-Computer Science

Cai, Yu, "On Proxy Serve Based Multipath Connection."  
Advisor: Robert Sebesta

EAS-Electrical Engineering

Zheng, Gang, "Projective Invariant Hand Geometry."  
Advisor: C. Wang

**Master Theses**

Beth-El

Sacks, Jodi Lee, "Beyond Physical Suffering: A Fracture in Trust."  
Advisor: Kathy LaSala

Sokol-Guest, Felecia, "The Lived Experience of the Divorced Mother."  
Advisor: Kathy LaSala

Willemyns, Kathleen JoAn, "Coronary Heart Disease in Women: Colorado Nurse Practitioners Screening Practices & Recognition of Gender-Based Signs Symptoms."  
Advisor: Kathy LaSala

EAS-Computer Science

Bryan, Jeremy, "Fast Simulation of Lightning for 3D Games."  
Advisor: Robert Sebesta

Kosuri, Syama, "Multiple Path Connection Through a Set of Connection Relay Servers."

Advisor: Robert Sebesta

Petrie, Tracy, "Configuration Machines a Novel Approach to the User Driven Computer Configuration Problem."

Advisor: Robert Sebesta

Watson, Frank, "Enhance TCP Performance with Multiple Path Routing."

Advisor: Robert Sebesta

EAS-Electrical Engineering

Eisenbeis, Greg, "Patient Monitoring Using Support Vector Machines."

Advisor: C. Wang

Kemp, Paul, "Concatenated Coding System for a Varying Channel."

Advisor: T.S. Kalkur

Roberts, Paul D., "Neighbor-Aware Stochastic Communication for Network-on-Chip."

Advisor: C. Wang

Furlong, Jonathan, "Active Flow Control of Two Dimensional Fluid Models."

Advisor: Ken Saunders

GSPA-MPA

Olnstead, Donald, "The Director of National Intelligence-An Improvement."

Advisor: Terry Schwartz

LAS-Anthropology

Segin, Steve, "Treading on the Past: The Affects of Armored Vehicles on Archaeological Sites."

Advisor: Bob Melamede

LAS-Communications

Valentine, Christopher, "Paramedic Patient Communication: A Triangulated Study of Communicating Trust."

Advisor: Mike Hackman

LAS-Geography

Khaliqi, David, "Habitat Factors Affecting Nest Site Selection of the Black Swift (*Cyseloides niger*) in Colorado."

Advisor: Steve Jennings

Humber, Thomas, "Explorations of Geographical Thought and Development: Examination of Travel Narratives in Search of a Nineteenth Century Geographical Epistemology."  
Advisor: Curt Holder

Ostling, Johanna, "Warning Behavior & Response: Investigation of Public Response During the Palm Beach County Tornado of 7 August 2003."  
Advisor: Eve Gruntfest

LAS-Psychology

Adkins, Paula, "Repetition Blindness and Homophone Blindness in Sentences and Lists."  
Advisor: Hasker Davis

Brown, Kathryn, "Gender and Age affects on Personality Disorders and other Clinical and Neuropsychological Syndromes in Children and Adolescents."  
Advisor: Hasker Davis

Harrison, Julie, "Time Dependent Decision Making in Older and Younger Adults."  
Advisor: Hasker Davis

Starky, Michael, "An Analysis of Quantitative Electroencephalograph Parameters In Attention Deficit/Hyperactivity Disordered Children."  
Advisor: Hasker Davis

LAS-Sociology

McCaslin, Zek, "Gender Stereotypes in Next Generation Video Games."  
Advisor: Richard Dukes

McGarrigle, Molly, "Gender Differences Among Middle School Science Students: Self-Efficacy, Attitudes Towards Science, and Achievement."  
Advisor: Richard Dukes

## **Appendices**

## Appendix A

### **Expanding Research Horizons**

#### **Concepts for a Campus Strategic Plan for Research Developed by the Campus Faculty Research Council**

##### **Research Council Members:**

Drs. Sue Byerley, Library; Robert Camley, PES; Zbigniew Celinski, PES; Thomas Huber, GES; Jenenne Nelson, Beth El; Karen Newell, Biology; Dorothea Olkowski, Philosophy; Tom Pyszczynski, Psychology; Ken Saunders, MAE; Rodger Ziemer, ECE.

##### **Goal:**

The campus must maintain, and if possible accelerate its recently realized momentum in pursuing and obtaining externally sponsored programs.

##### **Background:**

- Research is fundamental to a university. It involves the creation of knowledge.
- Research and teaching are inexorably intertwined. Plus, having students directly involved in research enhances the student's educational experience (e.g., it makes them better problem solvers)
- Sponsored research helps fund graduate and undergraduate education, funds laboratory expansion, and helps cover many real costs of campus operation.

##### **Principles:**

- The pursuit of sponsored programs will be consistent with the educational role and mission of the campus – pursuit of funding merely for the sake of money is not the goal.
- All research contributions, whether funded or not, are valued.

##### **Components of the Plan:**

1. Strengthen the research culture of the faculty and the administration
  - a. Promotion and Tenure (P&T) process and criteria
    - i. Expand the discussion beyond sponsored research

- ii. Encourage far-reaching dialog on research activities valued through the P&T process
    - iii. Promote P&T criteria that do not undervalue the pursuit of appropriate research funding.
    - iv. Initiate through revised P&T policy discussions currently underway
  - b. New policies
    - i. PI incentives – salary augmentation funded via grants
    - ii. F&A waivers – codify appropriate practices uniformly followed
    - iii. Course buy out (encourage college discussions)
    - iv. Funding of small campus research awards from ICR
    - v. P&T criteria (as in 1.a above)
    - vi. Enable hiring new tenure-track faculty on soft moneys
    - vii. Revise dean’s merit evaluations such that they include research promotion in their college. Deans meet individually with Research Council at least each semester.
  - c. Mechanisms to recognize non-funded research
    - i. Expand campus CRCW research awards
    - ii. Support small summer research stipends – perhaps funded by ICR
    - iii. Faculty participation in the new Austin Bluffs Center for R&D - open to all

## 2. Leverage critical capabilities

- a. Increase research capacity of grant-active faculty
  - i. Enable grant-funded hiring of instructors
  - ii. Develop appropriate system of differentiated workload allowing greater emphasis of research or instruction.
  - iii. Identify and acquire additional research space
- b. Hire more senior grant-experienced faculty
- c. Continue mentoring program for faculty – especially new faculty
- d. Expand capabilities of campus research offices – additional faculty associates for research, and staff. Hire full-time exempt staff member in OSP for compliance and contracts
- e. Expand and strengthen graduate programs, especially in areas of high grant potential.
- f. Mentor and off-load new faculty to allow establishment of their research programs.

## 3. Provide high-profile leadership

- a. Involve Chancellor’s office appropriately
  - 1. Make case for broad-based (i.e., funded and non-funded) research initiative

2. Promote approval of comprehensive new policies and organizational structure. In particular, enhance ease of interactions between pre-and post-award functions (I.e., OSP and Grants Accounting).
  3. Help explain integrated research plan.
  - b. Establish Campus Research Officer position – Assoc. Vice Chancellor for Research
  - c. Enable Campus Research Officer’s participation in Executive Team.
4. Position campus for opportunities
    - a. Identify and pursue funding targets of opportunity - Review federal funding agency initiatives
    - b. Define campus research strengths - Assessment
    - c. Match strengths to opportunities
    - d. Develop and articulate integrated research plan - “connecting the dots”
  5. Provide sustainability
    - a. Create mentoring system for research leadership
    - b. Integrate with faculty associates affiliated with research office (as cited in 2.d above)
    - c. Get the right people involved, and in responsible positions.
  6. Pursue fundraising activities committed to rewarding and enhancing research capacity
    - a. Seek and acquire research space
    - b. Reward grant active faculty (e.g., endowed chairs)
    - c. Help fund graduate students
      - iv. Out-of-state tuition for grad students supported on research grants
      - v. Research fellowships for grad students working with grant-active faculty
    - d. Provide funding to allow hiring of more senior grant-active faculty
    - e. Provide funding to off load new faculty to establish their research programs
    - f. Seek research equipment donations
    - g. Sponsor research seminar series (campus wide and disciplinary specific)
    - h. Provide funding for faculty graduate teaching fellowships (funding to allow offering of low enrollment but critical graduate-level courses)

## Appendix B. All Projects Receiving Funding Awards During FY 05

PI	Title	Department	College	Sponsor	Begin	End
Abrams	MathOnline	MATH	EAS	CCHE	9/1/2004	9/1/2005
Ayen	Network Information and Space Security Center	NISSC	VCAA	AFOSR	3/1/2005	2/29/2008
Boult	SEE PORT: Surveillance and Enemy Evaluation with PTZ and Omni-directional reconnaissance technology	CS	EAS	RemoteReality Corporation	5/1/2004	10/30/2005
Boult	GPS-Based Tracking System for Trauma Patients	CS	EAS	NAVSYS Corporation	8/1/2004	1/30/2005
Boult	Catadioptric Canvas: Phase 1	CS	EAS	Remote Reality Inc.	9/1/2004	2/28/2005
Boult	Intelligent Imaging Systems	CS	EAS	Stream Processors Inc	9/1/2004	5/31/2005
Boult	C2Fuse: Vision Based Support of Fusion for Command and Control	CS	EAS	ONR	10/1/2004	9/30/2007
Boult	Content-Oriented Reading Software for Struggling Readers	CS/ED/COMM	EAS/ED/LAS	Active Arts	7/15/2004	2/15/2005
Boult	NSIF Images and Landmark Detection/Tracking	CS	EAS	NAVSYS	7/28/2004	12/31/2005
Boult/Newell	An Innovation Curriculum: Introduction to Innovation and Innovation Teams	CS/BIO	EAS/LAS	NCIA	3/1/2005	9/30/2006
Camley	Properties of magnetic multilayers, Microstructures and Nanostructures	PES	LAS	Army Research Office	5/1/2001	4/30/2004
Celinski	Broad band ferromagnetic resonance spectrometer for the study of interface defects in magnetic films	PES	LAS	Research Corporation	3/1/2005	3/31/2006
Celinski	2005 Research and Engineering Apprenticeship Program	PHYSICS	LAS	Academy of Applied Science	6/1/2005	8/31/2005
Chakravarty/Cascaval	Conference on Nonlinear Waves, Integrable systems, and their Applications	MATH	EAS	NSF	6/1/2005	5/31/2006

Chamillard/Boult	Automated Detection of Steganographic Content	CS	EAS	Colorado Engineering Inc.	7/1/2004	3/31/2005
Christensen	Nanotechnology Throughout the Curriculum	PES	LAS	CIT	7/1/2004	6/30/2005
Christensen/Venn/Grogger/Simonton	RDE-DEI: Enhancing Geology, Chemistry, Biology, and Physics Laboratory and Field Experiences for Syudents with Visual and Physical Disabilities	PES/SPED/GEOL/DIS SERV	LAS/EDVCSS	NSF	9/1/2004	8/31/2005
Greene	Legal assessments of decision making capacity in older adults	PSYCH	LAS	Borchard Foundation Center on Law & Aging	7/1/2005	6/30/2006
Gruntfest/Benight	The Warning Project	GEO/Psych	LAS	NSF	11/1/2004	10/31/2005
Gruntfest/Sparks	Superstorm of 1993: Changes in dissemination and use of warning information in the last 11 years	GEO	LAS	UCAR	5/26/2004	12/31/2004
Haefner	Pikes Peak Region Business and Education Pipeline Partnership -- Resource Mapping	EAS	EAS	Pikes Peak Workforce Center	9/1/2004	6/30/2005
Haefner	Colorado Alliance for Minority Participation (CO-AMP)	ENG	EAS	Colorado State University	11/1/2004	10/31/2005
Hagedorn	NOT: Not on Tobacco Program at Fountain Fort Carson High School	BETH-EL	BETH-EL	American Lung Association	7/1/2005	6/30/2005
Heflin	UCCS Online Principal Licensure Program	Extended Studies	ED	CCHE	1/14/2005	12/31/2006
Hoffman	UCAN Serve AmeriCorps Program at UCCS	Student Employment	VCSS	Colorado Campus Compact	5/1/2004	4/30/2005
Holder	A foliar goeographic study of leaf water repellency as an adaptation to cloud forest enviroments	GEO	LAS	NSF	6/1/2005	5/31/2006
Kalita/Daly	CSEM Scholarships at the University of Colorado at Colorado Springs	CS	EAS	NSF	9/1/2004	8/31/2008
Kalkur	Summer Under Graduate Student Supplemental support for NSF project on "Polarization Switching D to A Converter"	ECE	EAS	NSF	6/1/2004	8/31/2004

Kalkur	EDS in Integrated Circuits	ECE	EAS	ATMEL	6/1/2004	8/31/2004
Klebe/Durham	Evaluation of the Parents Challenge Program	PSYCH	LAS	Parents Challenge	7/15/2004	6/30/2007
LaSala	Advanced Education Nurse Traineeship	BETH-EL	BETH-EL	HRSA	7/1/2004	6/30/2005
Lopusnik	Time- and frequency-domain investigations of thermally excited spin waves in ferrite and magnetic metallic films	Physics	LAS	Research Corporation	6/1/2005	5/31/2007
Lopusnik/Celinski/Camley	U.S.- Czech Materials Research: Optimization of magneto-optical nanostructures for high frequency applications	PES	LAS	NSF	1/1/2005	12/31/2007
Martorella	Shakespeare Theatre Tour	THEATRE	LAS	Colorado Council on the Arts	7/1/2004	6/30/2005
Martz	Financial Literacy - SIFE	BUSI	BUS	SIFE World Headquarters	3/1/2005	6/30/2005
Newell	Skin Sealant Wound Healing Investigation	BIO	LAS	Aspire Biotech	7/1/2004	12/31/2004
Qualls	Building Capacity in Geriatric Mental Health	PSYCH	LAS	Retirement Research Foundation	8/1/2004	6/30/2005
Qualls	Aging Families and Development Disabilities	PSYCH	LAS	UCHSC	7/1/2004	6/30/2005
Qualls	Aging Family and Caregiver Program	PSYCH	LAS	Pikes Peak Area Agency	1/1/2005	12/31/2005
Qualls	Aging Family & Caregiver Program	PSYCH	LAS	Pikes Peak Area Council of Governments	1/1/2005	12/31/2005
Riggs	Exhibition Support Grant	GALLERY	LAS	Colorado Council on the Arts	7/1/2004	6/30/2005
Rocha	On-site Academic and Student Support Services at Military Bases	CAMPUS EXTENDED STUDIES	VCAA	CCHE		
Rocha	Child Welfare Training Institute Foster Parent Training	AUSTIN BLUFFS CENTER	VCAA	Colorado Dept. of Human Services	7/1/2005	6/30/2006
Roney	Demosat II	MAE	EAS	CU Boulder	12/1/2003	4/30/2005
Roney	Colorado Space Grant	MAE	EAS	CU Boulder	2/3/2004	1/31/2005
Roney	Determining the Momentum Coupling between a Plasma Actuator and the Surrounding Fluid through Experimental	MAE	EAS	US Air Force Academy	8/1/2004	5/31/2005

	Analysis					
Roney	NASA Space Grant	MAE	EAS	CU Boulder	2/1/2005	1/31/2010
Sagen	Graduate Certificate in Homeland Defense	NISSC	VCAA	CCHE	12/1/2004	8/1/2005
Saldarriaga	Expansion SBDC Training	BUSI	BUS	City of Colorado Springs	10/1/2004	9/30/2005
Saunders	Entrance Burr Formation in Meso Scale Milling	MAE	EAS	Sandia National Laboratory	#####	9/30/2005
Schinazi	Spacial stochastic Models in population biology	MATH	EAS	National Security Agency	6/1/2004	5/31/2006
Schmidt/Tragesser/Roney/Stevens	Performance Analysis of Near-Space Vehicles	MAE	EAS	Army Space Command	7/5/2005	11/1/2005
Schoffstall/Anderson/Gaddis	Discovery Equipments as a Vehicle for Enhanced Learning	CHEM	LAS	NSF	9/1/2004	8/31/2006
Sievers	FY 06: Implementation of the Sexual Assault Nurse Examiner (SANE) Goals & Objectives	BETH-EL	BETH-EL	CCASA	6/1/2005	6/30/2006
Sievers	FY 05: Implementation of the Sexual Assault Nurse Examiner (SANE) Goals & Objectives	BETH-EL	BETH-EL	CCASA	4/15/2004	6/30/2005
Stevens/Newell	A Bioengineering Certificate and Research Program at UCCS	MAE/BIO	EAS/LAS	CIT	9/1/2004	8/31/2005
Tragesser	Satellite Formation Design for Space-based Radar Applicatons	MAE	EAS	Air Force Research Lab-Space Vehicles	8/16/2004	8/15/2005
Venn	Special Ed Access	SPED	ED	Colorado Department of Education	7/1/2004	6/30/2005
Weiss	The Chemistry of Enzyme Sensor Microchips	CHEM	LAS	Research Corporation	6/1/2005	5/31/2007
Wert	Growth of the Game Grant	PGM	BUS	PGA of America Foundation	1/1/2005	12/31/2007
Wood	Limited Guardianship to Maximize Independence of Elders	PSYCH	LAS	Harvard University	6/1/2004	8/31/2006
Zhang	RUI: Percolation Models	MATH	EAS	NSF	7/1/2004	6/30/2006
Ziemer/Ciletti/Dandapani/Plett/Kalkur/Wickert	Balancing the ECE Curriculum with the Kolb Learning Cycle	ECE	EAS	NSF	7/1/2004	7/31/2006

